
Roche

Roche

YTD September 2021 sales

Basel, 20 October 2021

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Group

Severin Schwan
Chief Executive Officer

YTD Sep 2021 performance

Outlook

YTD Sep 2021: Continued strong performance; Guidance raised

- **Guidance raised: Sales growth** to **“mid-single digit”** from “low- to mid-single digit”, **Core EPS growth broadly in line with sales growth**
- **Group sales up +8%**
  - **Diagnostics** with double digit growth in Q3 (+18%), despite high base, **strong recovery of base business**
  - **Pharma** continued growth in Q3 +5% (Q2:+4%), **strong performance of new products** (capturing >50% of Pharma sales)
- **Good development of pipeline**
  - Pharma: 14 Phase III trials initiated; 17 NMEs in late stage (pivotal)
  - Diagnostics: Significant launches in Q4 (cobas® 5800, cobas® pulse, AVENIO FoundationOne kit & NAVIFY Oncology 1.0)
- **Strong news flow over the next 1.5 years**
  - Faricimab and PDS in ophthalmology, Polivy and CD20xCD3 bi-specifics in hematology, AT-527 in SARS-CoV-2, Tecentriq in the adjuvant setting in various cancer types, tiragolumab + Tecentriq combo in 4 different cancer types, giredestrant (SERD) in HR+ breast cancer
  - BTD for gantenerumab in Alzheimer’s disease in Q3

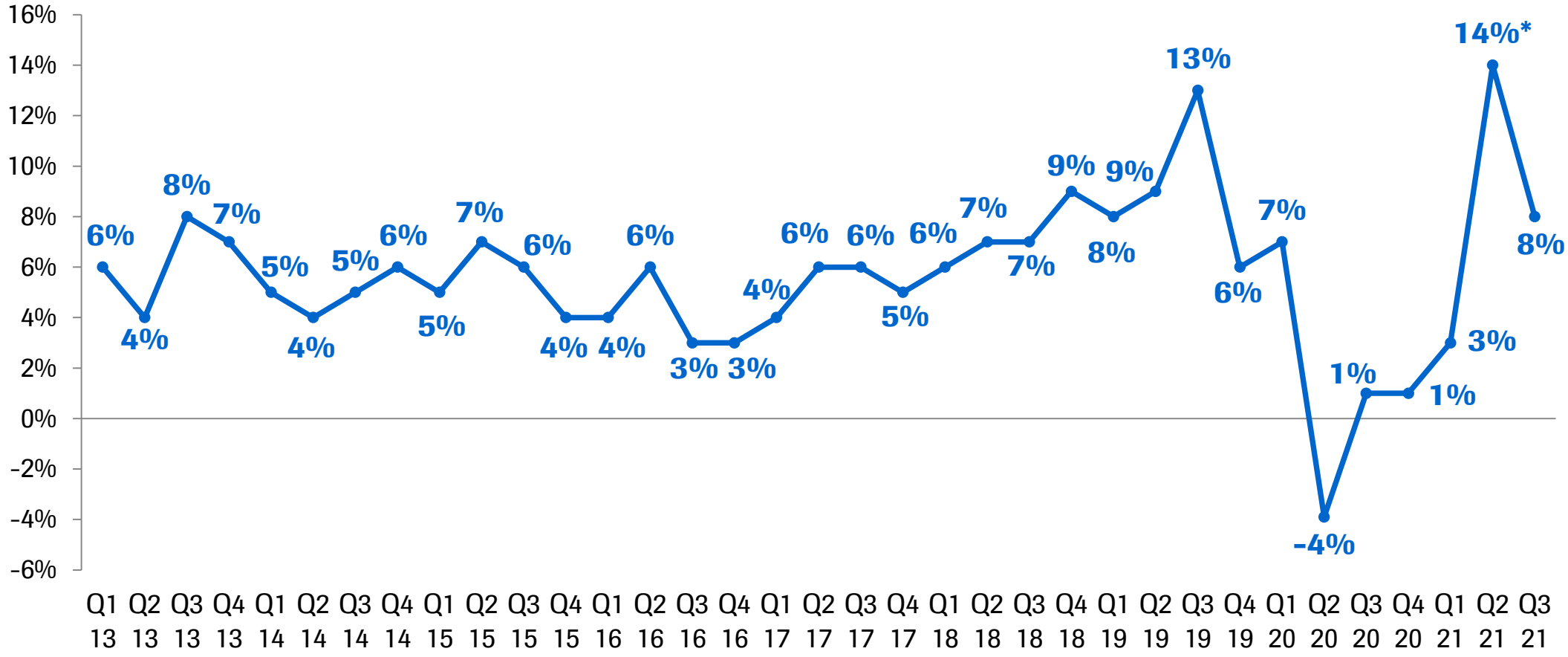
Growth rates at CER (Constant exchange Rates)

YTD Sep 2021: Sales growth driven by Diagnostics Division

	2021 CHFbn	2020 CHFbn	Change in % CHF	Change in % CER
Pharmaceuticals Division	**33.4**	34.3	**-3**	**0**
Diagnostics Division	**13.3**	9.7	**38**	**39**
Roche Group	**46.7**	44.0	**6**	**8**

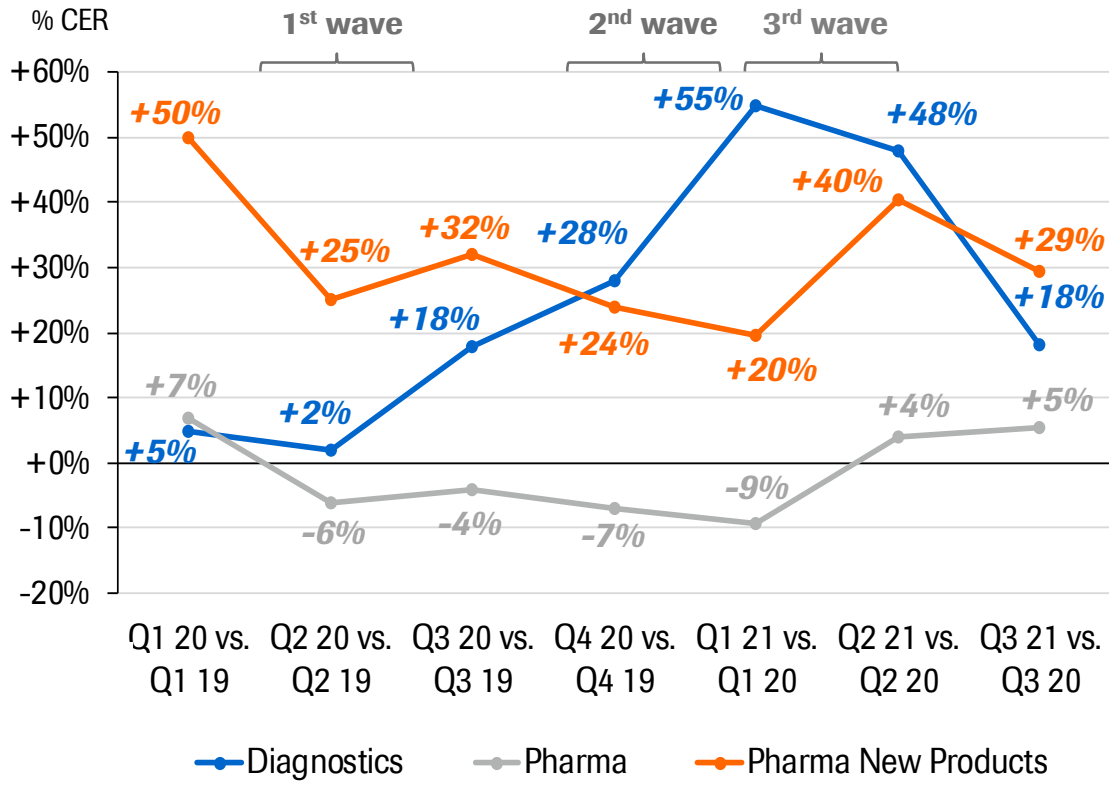
CER=Constant Exchange Rates

Q3 2021: Strong sales growth



Growth rates at CER (Constant exchange Rates); * Q2 2020 sales severely impacted by COVID-19 pandemic onset

Q3 2021: Strong business momentum



Pharmaceuticals

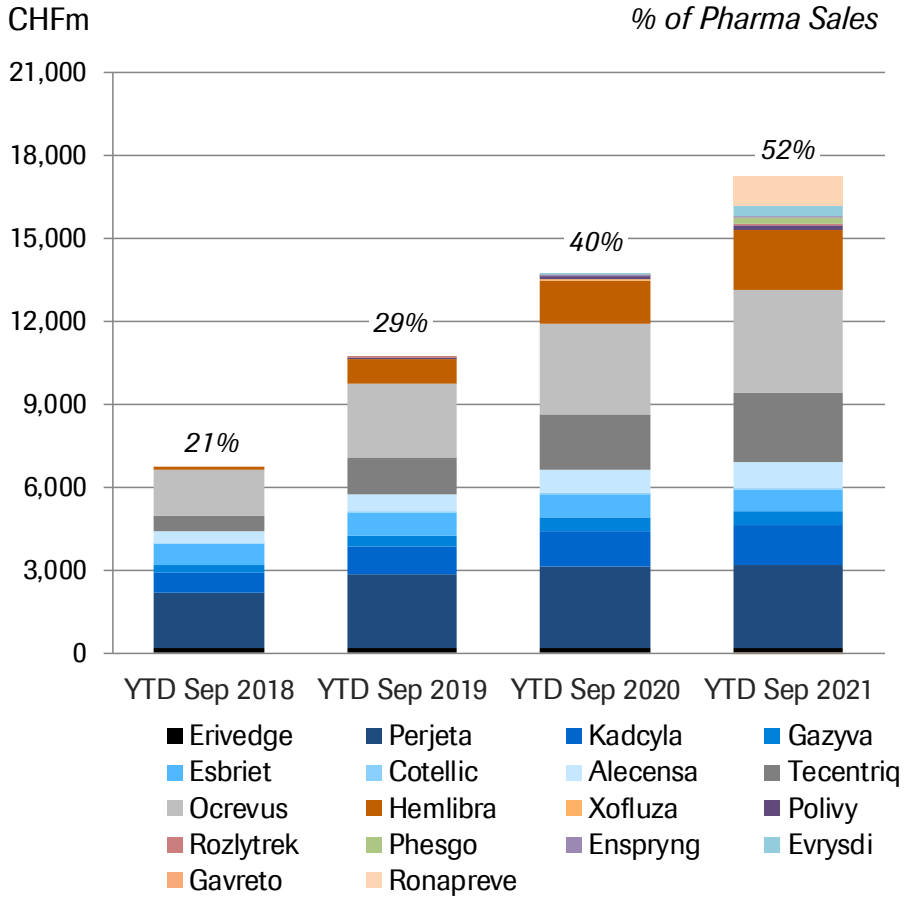
- Recovery in Q3 2021 expected to continue in Q4 2021
- Impact from biosimilars, expected to flatten in the coming quarters

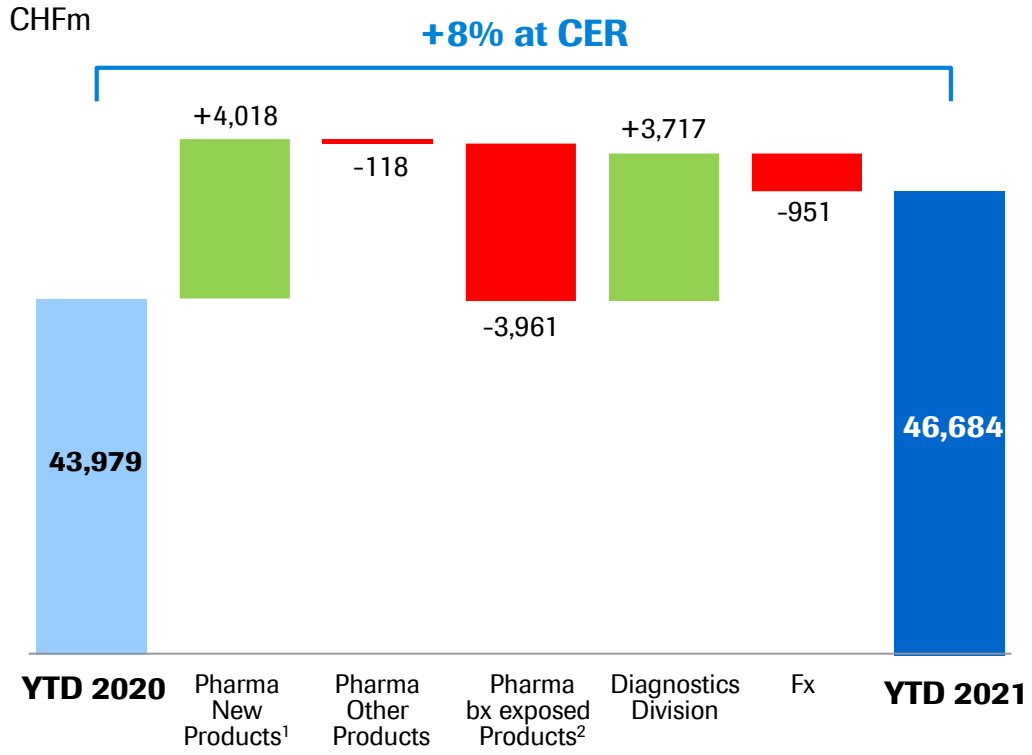
Diagnostics

- Strong routine testing growth, +11% in Q3 2021
- COVID-19 business expected to show similar pattern in Q4 2021

Growth rates at CER (Constant Exchange Rates)

YTD Sep 2021 Pharma: New products with continued momentum compensating for biosimilar impact





YTD Sep values in reported CHFm, variances in CERm; [1] Pharma New Products: Erivedge, Perjeta, Kadcyla, Gazyva, Esbriet, Cotellic, Alecensa, Tecentriq, Ocrevus, Hemlibra, Xofluza, Polivy, Rozlytrek, Phesgo, Enspryng, Evrysdi, Gavreto, Ronapreve; [2] Pharma Bx exposed products: Avastin, Herceptin, MabThera/Rituxan

YTD Sep 2021 performance

Outlook

Pharma: Significantly advancing patient care

39 Breakthrough Therapy Designations received since 2013

Year	Molecule	Indication
2021	***gantenerumab***	*Alzheimer's disease*
	Venclexta + azacitidine	*higher-risk MDS*
2020	***tiragolumab +Tecentriq***	*1L PD-L1+ NSCLC*
	mosunetuzumab	*3L+ FL*
	Tecentriq	*unresectable or metastatic ASPS*
	Esbriet	*uILD*
2019	***Gavreto***	*RET fusion-positive NSCLC*
	Gavreto	*RET mutation-positive MTC*
	Cotellic	*Histiocytic neoplasms*
	Gazyva	*Lupus nephritis*
	rhPentraxin-2 (PRM-151)	*IPF*
	Venclexta + Gazyva	*1L unfit CLL*
	Kadcyla	*Adjuvant HER2+ BC*
2018	***SPK-8011***	*Haemophilia A*
	Enspryng	*NMOSD*
	Xolair	*Food allergies*
	Tecentriq + Avastin	*1L HCC*
	Hemlibra	*Haemophilia A non-inhibitors*
	Rozlytrek	*NTRK+ solid tumors*
2017	***Polivy + BR***	*R/R DLBCL*
	Venclexta + LDAC	*1L unfit AML*
	Zelboraf	*BRAF-mutated ECD*
	Rituxan	*Pemphigus vulgaris*

14 new Ph III studies initiated YTD

- Kadcyla + Tecentriq (KATE 3) in 2L+ HER2+ PDL1+ mBC
- giredestrant (IidERA) in ER+ adj. BC
- Kadcyla + Tecentriq (ASTEFANIA) in HER2+ eBC high-risk
- Tecentriq (IMvigor011) in ctDNA+, high-risk MIBC
- rhPTX-2 (STARSCAPE) in IPF
- Gazyva (MAJESTY) in membranous nephropathy
- faricimab (BALATON & CAMINO) in branch & central RVO
- PDS with ranibizumab (Velodrome) in wAMD (36w interval)
- fenebrutinib in RMS (FENhance 1/2)
- SRP-9001 (EMBARK) in DMD (collaboration with Sarepta)
- Enspryng (Luminesce) in Myasthenia Gravis
- AT-527 (MORNINGSKY) in adult pts with SARS-COV-2

Neuroscience · Infectious Diseases · Immunology
Oncology/Hematology · Ophthalmology

2021 outlook raised

Sales growth to "mid-single digit" from "low- to mid-single digit"

Group sales growth[1]	• Mid-single digit (from low- to mid-single digit)
Core EPS growth[1]	• Broadly in line with sales growth
Dividend outlook	• Further increase dividend in Swiss francs

[1] At Constant Exchange Rates (CER); based on the current assessment of the COVID-19 impact

Pharmaceuticals Division

Bill Anderson
CEO Roche Pharmaceuticals

YTD Sep 2021: Pharmaceuticals Division sales

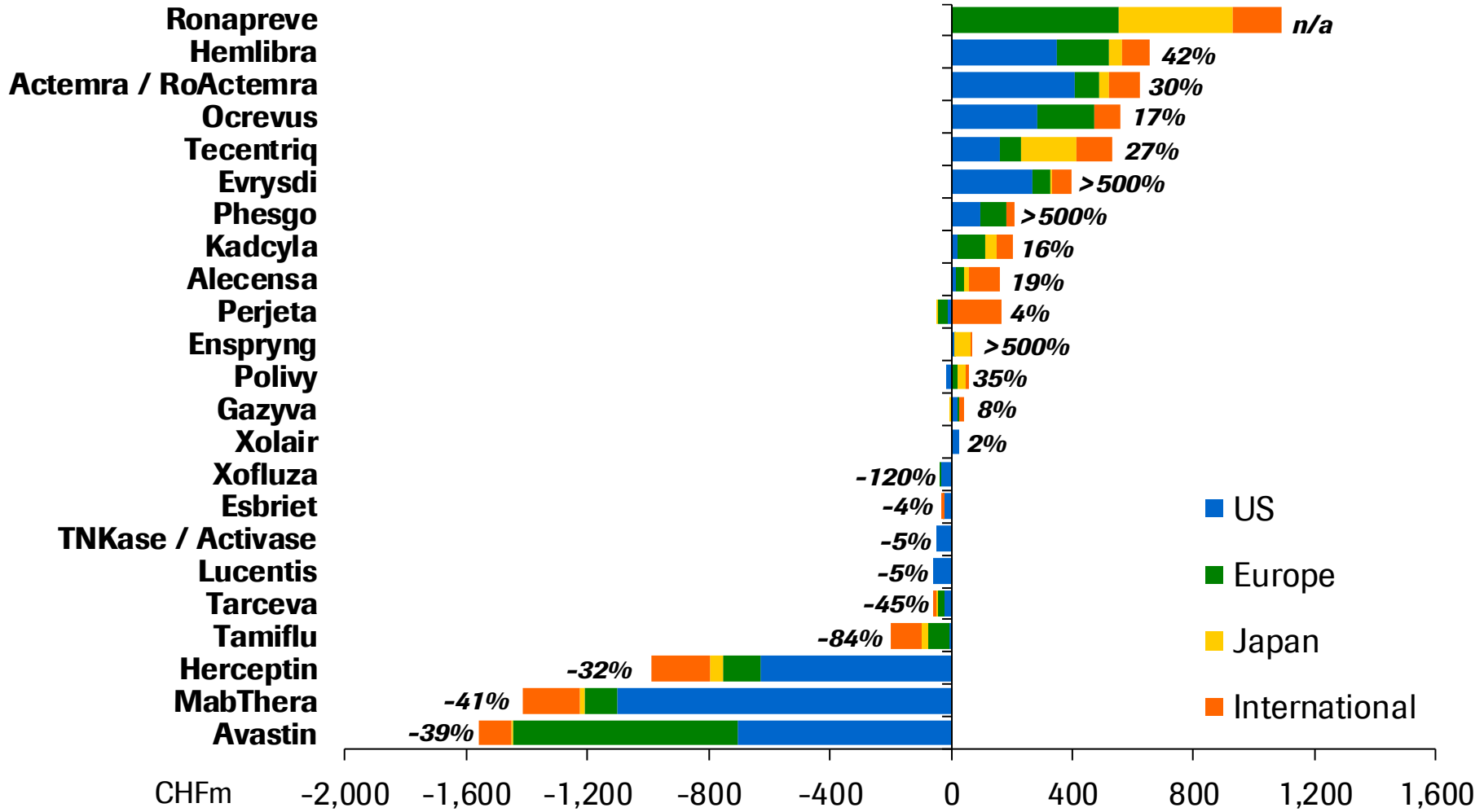
New products compensating for biosimilars despite COVID-19 impact

	2021 CHFm	2020 CHFm	Change in % CHF	Change in % CER
Pharmaceuticals Division	**33,379**	**34,317**	**-3**	**0**
United States	16,707	18,389	-9	-5
Europe	6,610	6,268	5	3
Japan	3,186	2,802	14	20
International	6,876	6,858	0	2

CER=Constant Exchange Rates

YTD Sep 2021: Continued portfolio rejuvenation

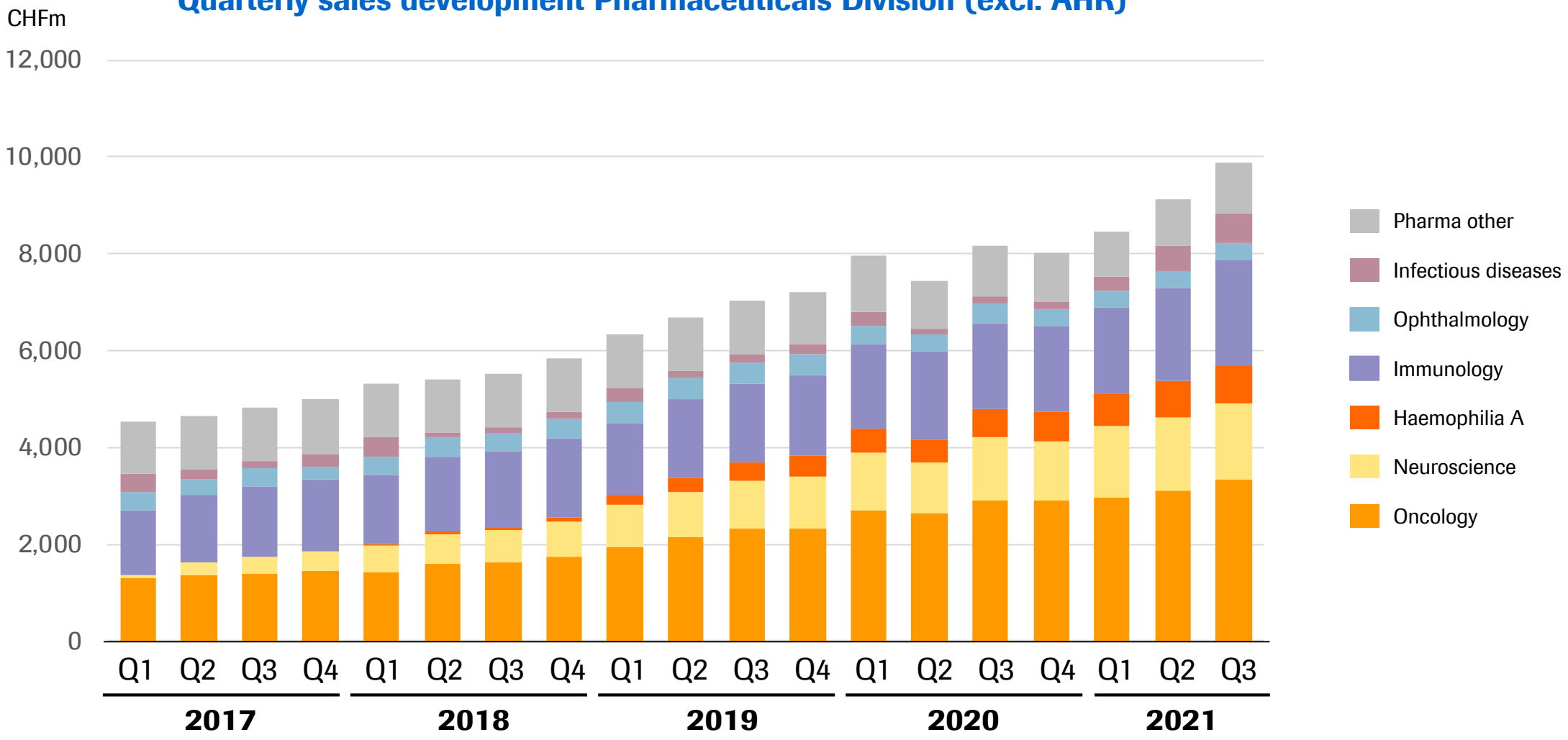
*>50% of sales from new products**



Absolute values and growth rates at Constant Exchange Rates (CER); * Erivedge, Perjeta, Kadcyla, Gazyva, Esbriet, Cotellic, Alecensa, Tecentriq, Ocrevus, Hemlibra, Xofluza, Polivy, Rozlytrek, Phesgo, Enspryng, Evrysdi, Gavreto, Ronapreve

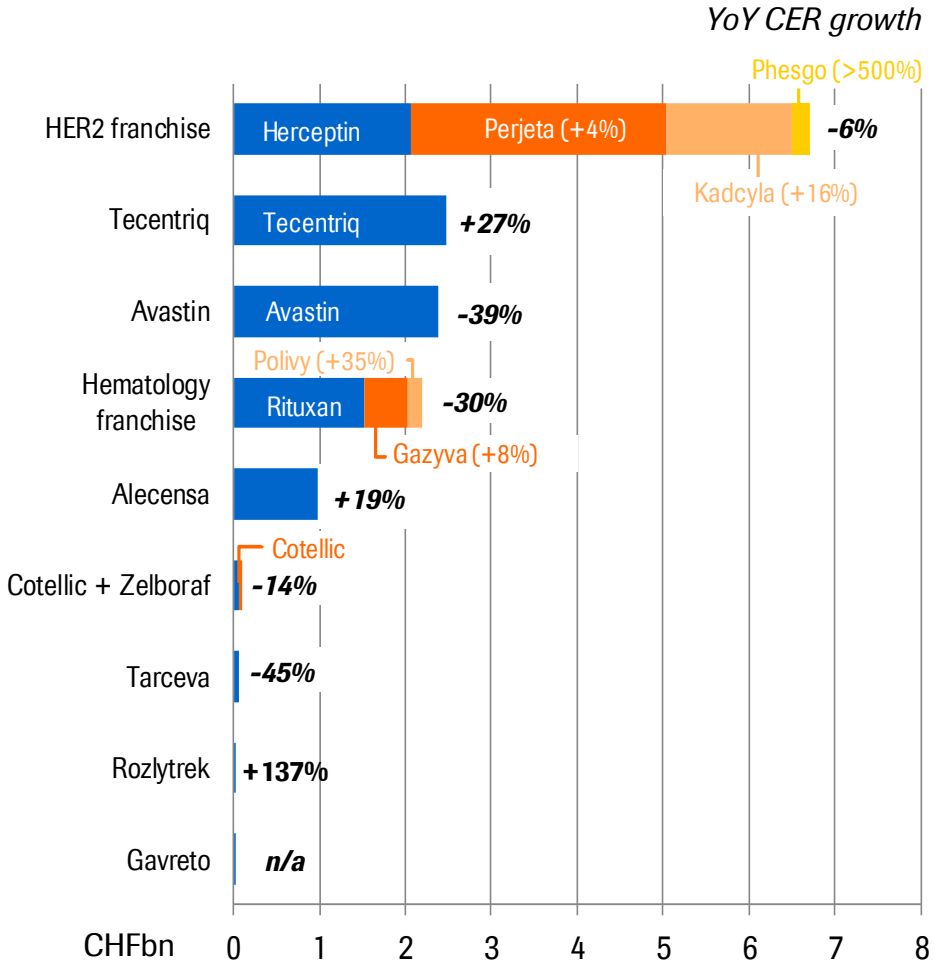
Pharma growth dynamic excl. AHR* further improving

Quarterly sales development Pharmaceuticals Division (excl. AHR)



* AHR=Avastin, Herceptin, MabThera/Rituxan; all absolute values in Constant Exchange Rates (avg. FY 2020); "Pharma Other" comprises the tail end products

YTD Sep 2021: Oncology still impacted by biosimilars & COVID-19



HER2 franchise

- Kadcyla (+16%) with growth in all regions due to adjuvant BC
- Perjeta (+4%) growth cannibalized by Phesgo launch
- Phesgo: Successful launch (CHFm 213) in US and EU ongoing

Avastin franchise

- Biosimilar erosion in all regions

Tecentriq

- Growth (+27%) driven by 1L HCC and 1L SCLC

Hematology franchise*

- Venclexta: Strong growth driven by 1L AML and 1L and R/R CLL
- Gazyva (+8%): Growth due to 1L FL and in 1L CLL
- Polivy (+35%): Growth in R/R DLBCL; Positive Ph III (POLARIX) results in 1L DLBCL to be presented in H2 2021

Alecensa

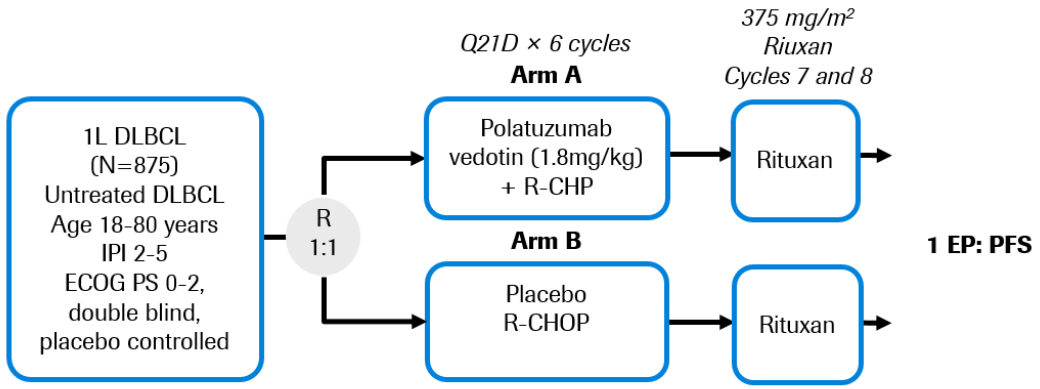
- Growth (+19%) driven by all regions

CER=Constant Exchange Rates; 2021 YTD Sep Oncology sales: CHF 15.4bn; CER growth -14%; * Venclexta sales booked by AbbVie and therefore not included (HY-2021 sales of USD 840m); Polivy in collaboration with Seagen; BC=breast cancer; HCC=hepatocellular carcinoma; SCLC=small cell lung cancer; AML=acute myeloid leukemia; R/R CLL=relapsed/refractory chronic lymphocytic leukemia; FL=follicular lymphoma; DLBCL=diffuse large B cell lymphoma

Hematology franchise

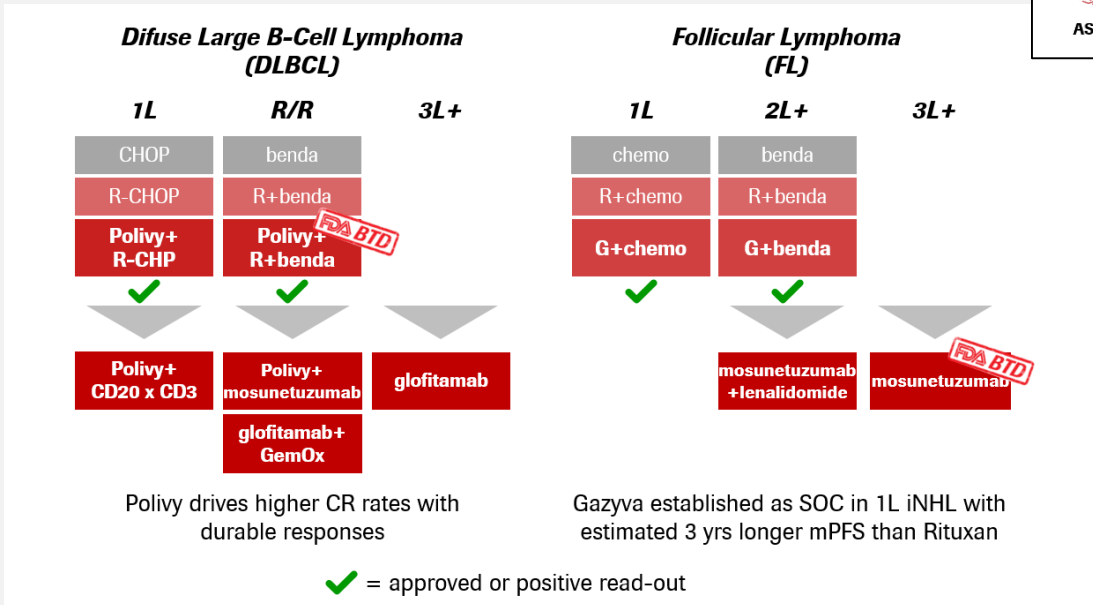
First positive Ph III (POLARIX) in a curative setting in the last 20 years

Ph III (POLARIX) trial design in 1L DLBCL



- Positive Ph III (POLARIX) results for Polivy + R-CHP in 1L DLBCL to be presented at upcoming conference
- First positive results in a curative setting in the last 20 years

Shaping the standard of care in NHL



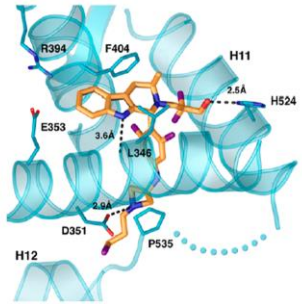
- Early filings for glofit in 3L+ DLBCL in Q1 2022 and for mosun in 3L+ FL in Q4 2021 on track
- Ph III (SUNMO) Polivy + mosun in 2L+ DLBCL to start in Q4 21
- Ph III (STARGLO) glofit + GemOx in 2L+ DLBCL started in Q1 21
- Ph III (CELESTIMO) mosun + lenalidomide in 2L+ FL to start in Q4 21

DLBCL=diffuse large B-cell lymphoma; NHL=Non-Hodgkin lymphoma; R=Rituxan; CHP=cyclophosphamide, doxorubicin, prednisone; DLBCL=diffuse large B cell lymphoma; FL=follicular lymphoma; R/R=relapsed/refractory; PFS=progression free survival; GemOx=gemcitabine, oxaliplatin; G=Gazyva; BR=bendamustine+Rituxan; benda=bendamustine; mosun=mosunetuzumab; glofit=glofitamab; Polivy in collaboration with Seagen

HR+/HER2- breast cancer: Giredestrant a next generation SERD

Encouraging Ph II neoadjuvant interim results presented

Selective ER degrader (SERD)



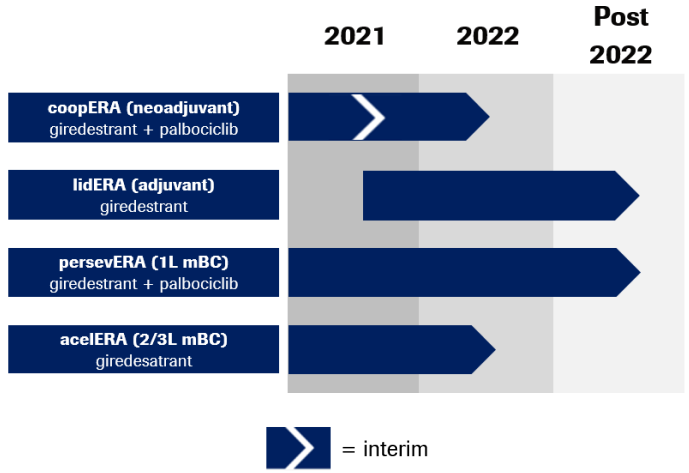
- Potentially best-in-class efficacy being 7-15x more potent than other SERDs in development
- Differentiated MOA leads to immobilization of the ER prior to its degredation
- Standardized dose and similar exposure in mono and combination settings

Ph II (coopERA) interim results in neoadjuvant setting

Ki67 reduction and complete cell cycle arrest (CCCA)

	Giredestrant n = 44	Anastrozole n = 39
Relative reduction at Week 2 from baseline		
Geometric mean (95% CI)	**–80%** (–85%, –72%)	**–67%** (–75%, –56%)
P-value (proportional change)	0.0222†	
CCCA (≤2.7%)		
Week 2 (%)	11 (25.0%)	2 (5.1%)
Difference between arms (95% CI)	–19.87% (–36.84%, –2.91%)	

Trial program

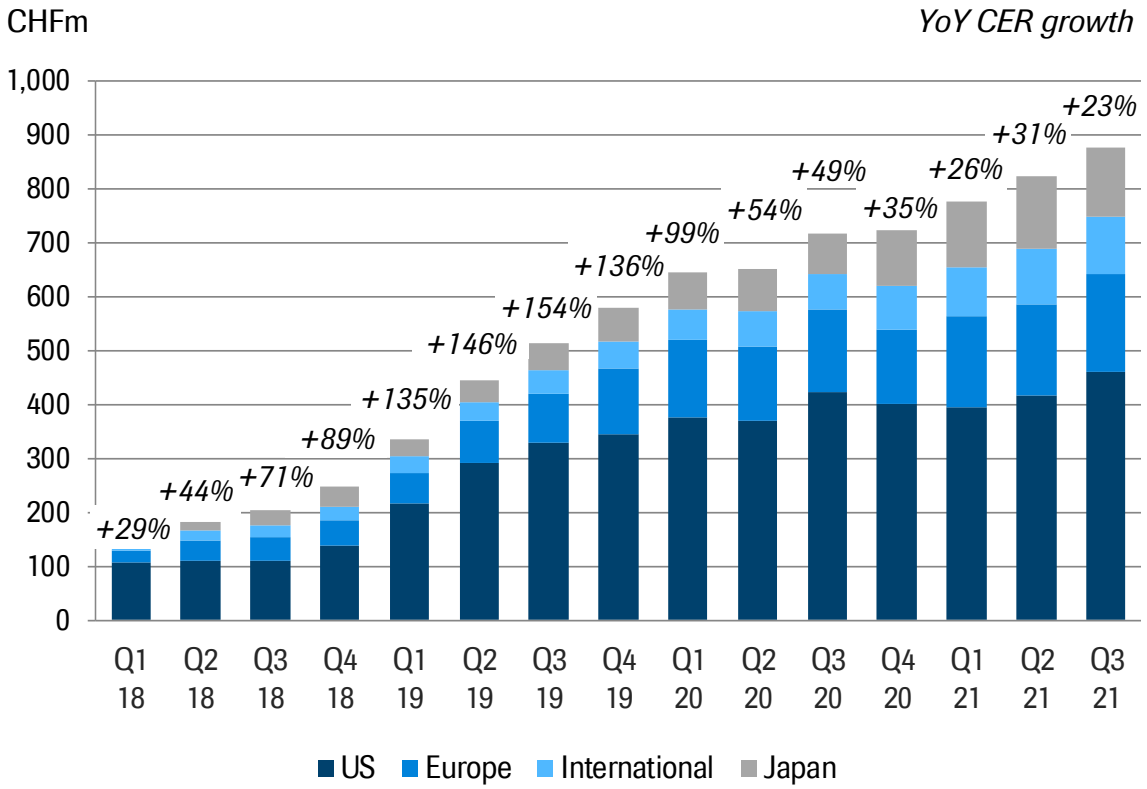


- Encouraging impact on proliferation (-80% relative reduction in Ki67 at week 2)
- 25% of tumors with complete cell cycle arrest (CCCA) at week 2
- Safety consistant with known safety profile; Efficacy supportive of 30mg dose
- Ph III (lidERA) giredestrant vs SOC in the adjuvant setting started in Q3 2021
- Ph II (acelERA) in 2/3L mBC results expected mid 2022

Hurvitz S.A. et al., ESMO 2021; HR=hormone receptor; SERD=selective ER degrader; MOA=mechanism of action; ER=estrogen receptor; DDI=drug drug interaction; mBC=metastatic breast cancer; SOC=standard of care

Tecentriq overview: Growth driven by first-in-class indications

Landmark results in adj. NSCLC filed globally and US approval achieved



Tecentriq Q3 update

Lung franchise (NSCLC, SCLC)

- EU: Growth driven by 1L SCLC
- US/EU/Japan/China: Adjuvant PDL1+ NSCLC (IMpower010) filed (RTOR in the US)
- US: IMpower010 accelerated approval achieved

GI franchise (HCC)

- US/EU/Japan: Growth driven by 1L HCC

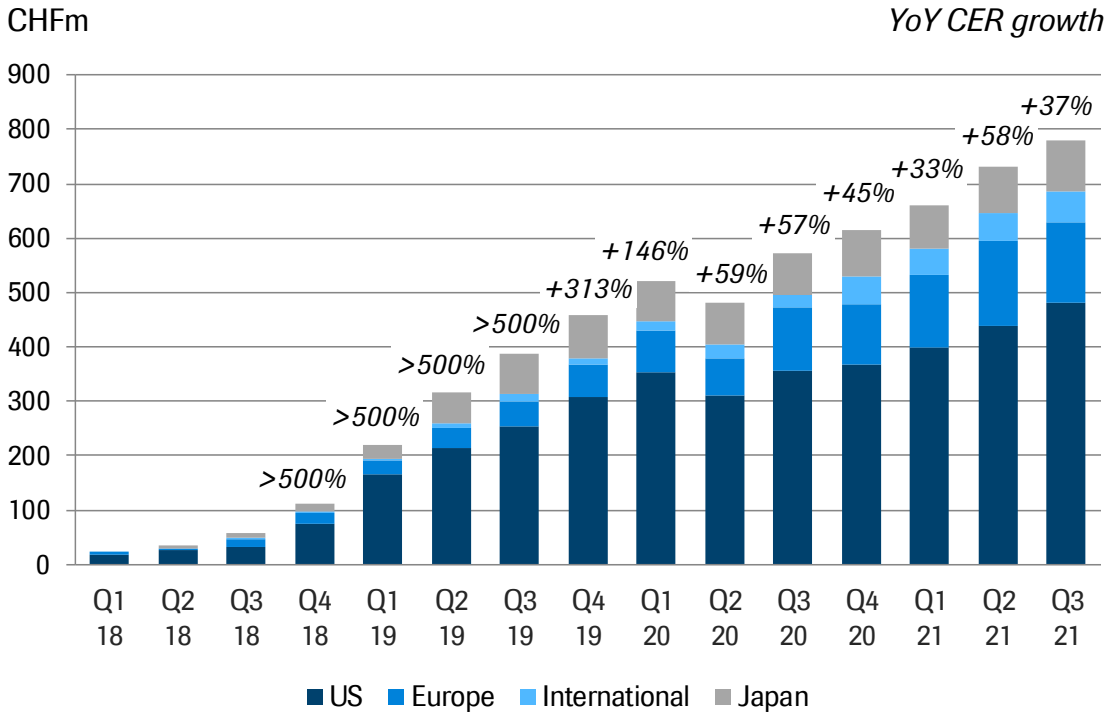
Outlook 2021

- Ph III (IMforte) Tecentriq + lurbinectedin in 1L maintenance SCLC to be initiated

CER=Constant Exchange Rates; NSCLC=non small cell lung cancer; SCLC=small cell lung cancer; HCC=hepatocellular cancer; RTOR=real time oncology review; lurbinectedin in collaboration with Jazz Pharmaceuticals

Hemophilia A Franchise: Hemlibra growing strongly

31% US/EU-5 patient share reached



Hemophilia Q3 update

- US/EU: Gaining market share in non-inhibitors
- #1 prescribed prophylaxis in the US for people with Hemophilia A; >12,500 patients treated globally
- Hemlibra continues to penetrate across all patient types
- EU: Hemophilia A in mild/moderate patients (HAVEN 6) filed

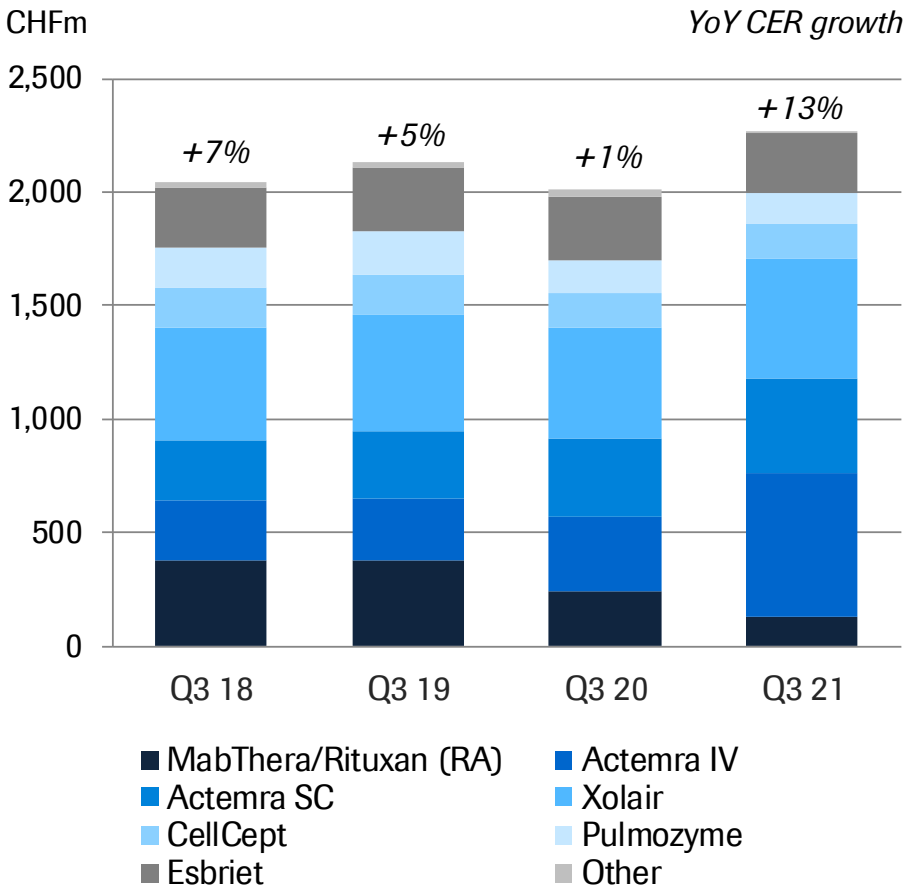
Outlook 2021

- US/EU: Further patient share gains in non-inhibitors

CER=Constant Exchange Rates

Immunology franchise remains impacted by COVID-19

Actemra for COVID-19
FDA
Emergency Use Authorization



Immunology Q3 update

Actemra (+57%)

- WHO recommends IL-6 inhibitors for hospitalized COVID-19 patients
- Remains leading RA monotherapy in EU-5; shift from IV to SC

Esbriet (-5%)

- COVID-19 impact on new patient starts

Xolair (+8%)

- Remains leader in biologics asthma market; growth in CIU
- Self-injection (home use) approved in US in Q2

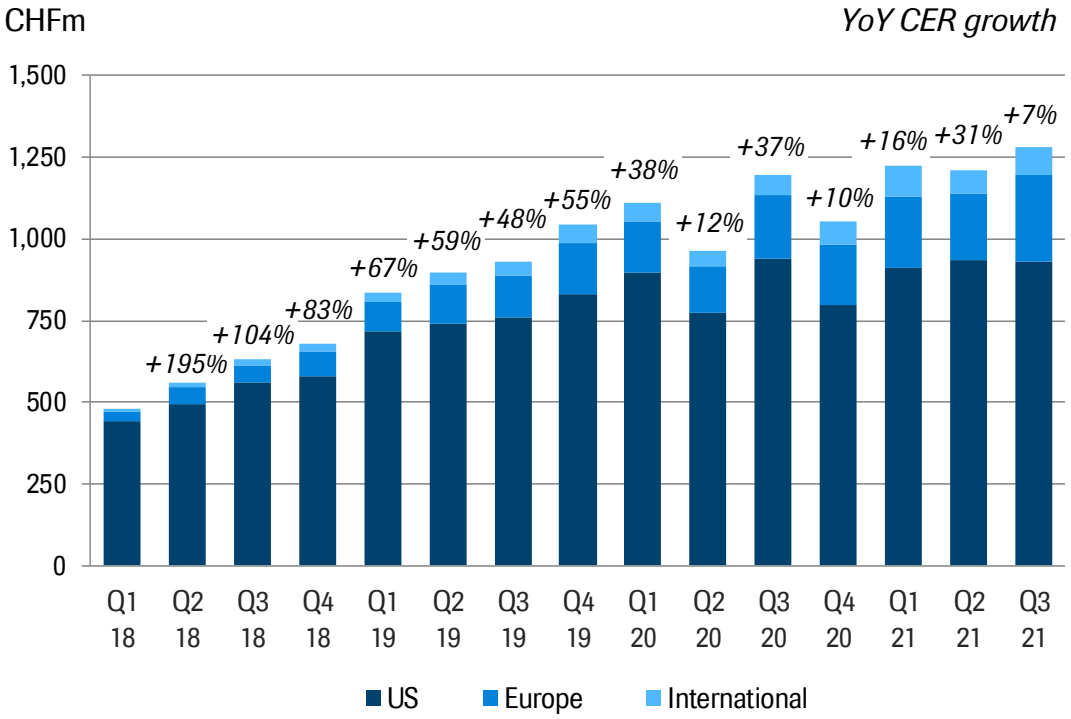
Outlook 2021

- Ph III (ALLEGORY) Gazyva in systemic lupus erythematosus (SLE) to start in Q4 2021

CER=Constant Exchange Rates; WHO=world health organization; RA=rheumatoid arthritis; IV=intravenous; SC=subcutaneous; CIU=chronic idiopathic urticaria

MS franchise: Ocrevus total US market share increases to 29%

MS late stage development programs progressing well



Q3 update

- US impacted by SARS-CoV-2 delta wave
- Higher dose Ocrevus: Ph III (MUSETTE) in RMS and Ph III (GAVOTTE) in PPMS recruiting strongly
- Fenebrutinib (BTKi): Ph III programs in RMS (FENhance I/II) and PPMS (FENtrepid) recruiting
- Up to 8-year follow up data in RMS and PPMS presented at ECTRIMS

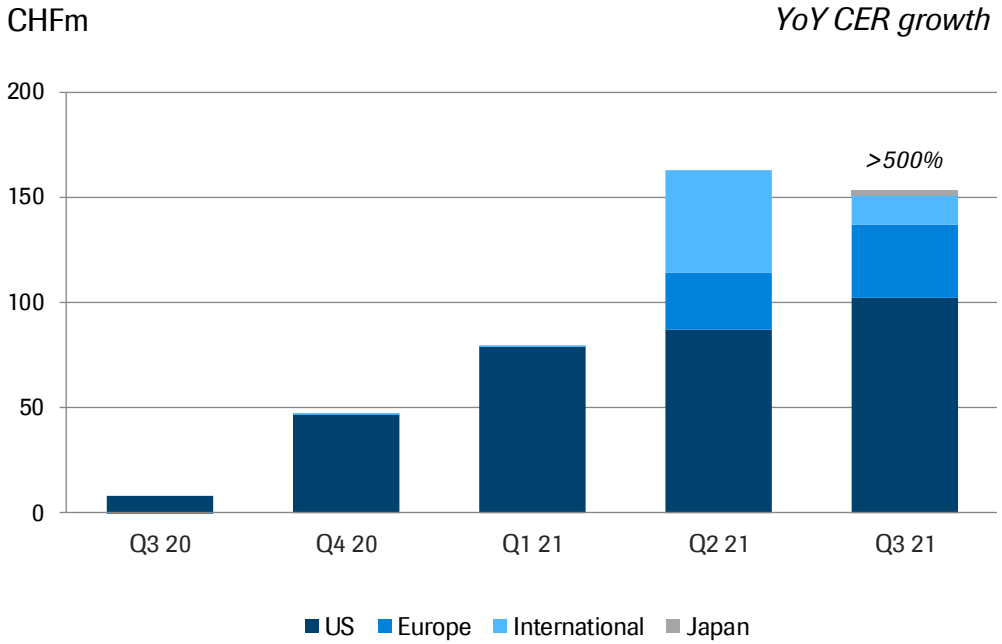
Outlook 2021

- Continued growth expected with further impact from COVID-19

CER=Constant Exchange Rates; MS=multiple sclerosis; RMS=relapsing MS; PPMS=primary progressive MS

SMA franchise: Evrysdi with strong US and EU launches

Most prescribed US treatment with ~20% total share after <14 months



Q3 update

- ~4,000 patients treated world wide (commercial, clinical trials, compassionate use)
- US: >550 HCPs from >400 sites have prescribed Evrysdi
- EU: Strong launch in early launch countries
- ~2/3 of all treated patients switched from Spinraza and/or Zolgensma; 1/3 naive patients

Outlook 2021

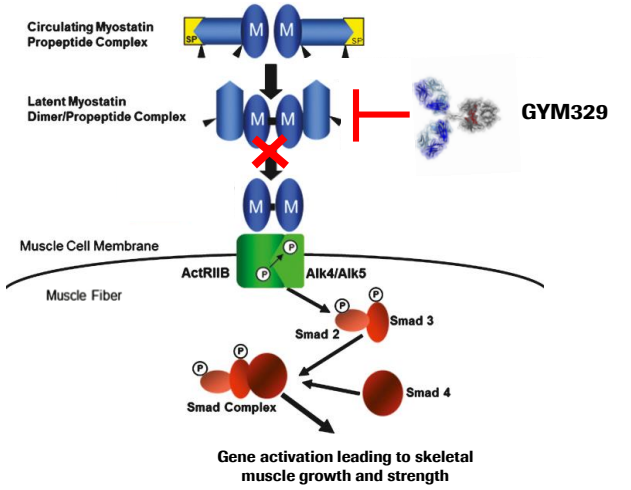
- Continued growth and market share gains expected
- Ph II/III (MANATEE) Evrysdi + GYM329 in SMA to be initiated

CER=Constant Exchange Rates; SMA=spinal muscular atrophy; HCP=health care professional; GYM329 in collaboration with Chugai

SMA franchise: Anti-latent myostatin recycling antibody

Ph II/III combination study with Evrysdi initiated

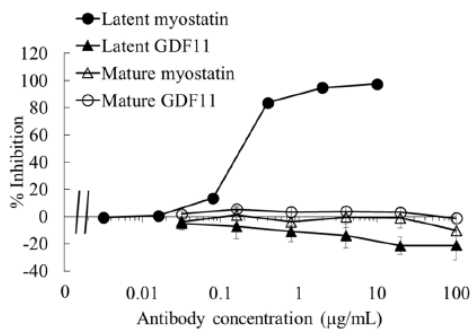
Anti-latent myostatin recycling antibody (GYM329)



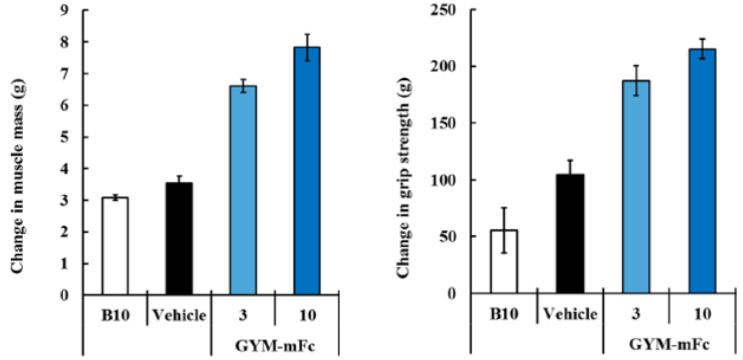
- GYM329 binds to the myostatin precursor protein inhibiting its activation by proteases
- Myostatin is a key negative regulator of skeletal muscle growth and strength

Preclinical GYM329 data in mouse models of muscle disease

Efficient inhibition of latent myostatin, but not GDF11



Increase in muscle mass and strength in mouse models



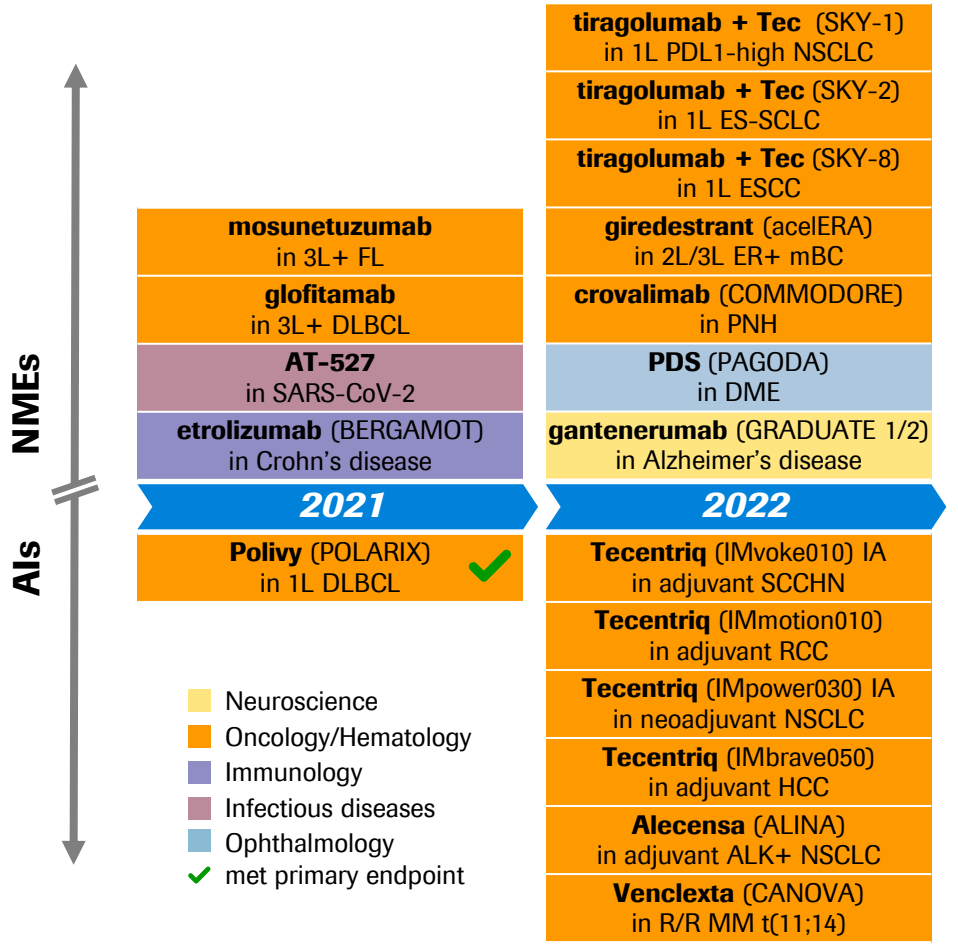
- Contrary to other drugs in development, GYM329 efficiently inhibits myostatin, but not the related muscle hormone GDF11, making it highly specific
- In an animal model of SMA disease a combination of GYM329 + SMN2 splicing modifier* improved muscle size and strength
- Ph I completed; No safety signals in healthy volunteers; Ph II/III start expected in Q1 22

Muramatsu H. et al., Nature Scientific reports (2021) 11:2160; *SMN-C1; SMA=spinal muscular atrophy; GYM329 in collaboration with Chugai

Our replace and extend strategy is progressing well

Replace ongoing franchises		Entering new franchises
MabThera/Rituxan	Gazyva, Venclexta, Polivy, mosunetuzumab, glofitamab	**Oncology:** Tecentriq (mUC, SCLC, HCC, mM, adj. NSCLC), ipatasertib (mCRPC), giredestrant (HR+ BC)
Herceptin	Perjeta, Kadcyla, Phesgo	**Non-malignant hem:** Hemlibra, SPK-8011, crovalimab (PNH, aHUS)
Avastin	Tecentriq, Alecensa, Rozlytrek, tiragolumab	**Neuroscience:** Ocrevus (RMS, PPMS), fenebrutinib (RMS, PPMS) Enspryng (NMOSD, gMG), Evrysdi, GYM329 (SMA), gantenerumab (AD), SRP-9001 (DMD)
Lucentis	Port delivery system (PDS) faricimab	**Infectious diseases:** Ronapreve (COVID-19), AT-527 (COVID-19)
Tamiflu	Xofluza	**Immunology:** etrolizumab (CD), Gazyva (LN, MN, SLE)
Esbriet	rhPentraxin-2	

Strong news flow ahead (data readout)



mUC=metastatic urothelial carcinoma; SCLC=small cell lung cancer; HCC=hepatocellular carcinoma; mM=metastatic melanoma; mCRPC=metastatic castration resistant prostate cancer; HR=hormone receptor; BC=breast cancer; PNH=paroxysmal nocturnal hemoglobinuria; aHUS=atypical hemolytic uremic syndrome; RMS=relapsing multiple sclerosis; PPMS=primary progressive MS; NMOSD=neuromyelitis optica spectrum disorder; SMA=spinal muscular atrophy; AD=Alzheimer's disease; DMD=duchenne muscular dystrophy; CD=Crohn's disease; LN=lupus nephritis; MN=membranous nephropathy; SLE=systemic lupus erythematosus; FL=follicular lymphoma; DLBCL= diffuse large B cell lymphoma; NSCLC=non-small cell lung cancer; ESCC=esophageal squamous cell carcinoma; DME=diabetic macular edema; IA=interim analysis; SCCHN=squamous cell carcinoma of the head and neck; RCC=renal cell carcinoma; HCC=hepatocellular carcinoma; MM=multiple myeloma

2021: Key late-stage news flow*

	Compound	Indication	Milestone	
Regulatory	**Xofluza**	Healthy patients; High risk patients; Post exposure	EU approval	✓
	Evrysdi	SMA type 1/2/3	EU approval	✓
	faricimab	DME/nAMD	US/EU joint filing (DME+AMD)	✓
	Tecentriq	1L PDL1+ NSCLC	EU approval	✓
	Venclexta + azacitidine	1L unfit AML	EU approval	✓
	Ronapreve	SARS-CoV-2	EU approval	
	PDS ranibizumab	nAMD (continuous delivery)	US/EU filing; US approval	
Phase III / pivotal readouts	**faricimab**	nAMD	Ph III TENAYA/LUCERNE	✓
	Ronapreve	SARS-CoV-2 Outpatient	Ph III Study 2067	✓
	Ronapreve	SARS-CoV-2 Post-exposure prophylaxis	Ph III Study 2069	✓
	Tecentriq	Adjuvant NSCLC	Ph III IMpower010	✓
	Evrysdi	SMA type 1/2/3 switching study	Ph II JEWELFISH	✓
	mosunetuzumab	3L+ FL	Ph Ib GO29781	
	Polivy + R-CHP	1L DLBCL	Ph III POLARIX	✓
	glofitamab	3L+ DLBCL	Ph Ib NP30179	
	Tecentriq + chemo	Adjuvant SCCHN	Ph III IMvoke010	**2022**

Additional 2021 news flow:

- **Ronapreve:** EMA positive scientific opinion for COVID-19
- **Actemra/RoActemra:** US approval for SSc-ILD
- **Xolair**: US approval for prefilled syringe for self-injection
- **Actemra:** US EUA for treatment of COVID-19 in hospitalized adults and children
- **Enspryng:** EU approval for NMOSD
- **AT-527**: Ph2 interim results (viral load reduction) for hospitalized patients
- **Ronapreve**: Positive Ph II/III (2066 study) results for sero-negative hospitalized patients
- **Tecentriq**: US accelerated approval for adjuvant PDL1+ NSCLC

Digitalization Event	*ASH*
November 17	**December 15**
16:00-17:30 CET	**16:00-17:30 CET**
15:00-16:30 GMT	**15:00-16:30 GMT**

* Outcome studies are event-driven: timelines may change; EUA=Emergency use authorization

Diagnostics Division

Thomas Schinecker
CEO Roche Diagnostics

YTD Sep 2021: Diagnostics Division sales

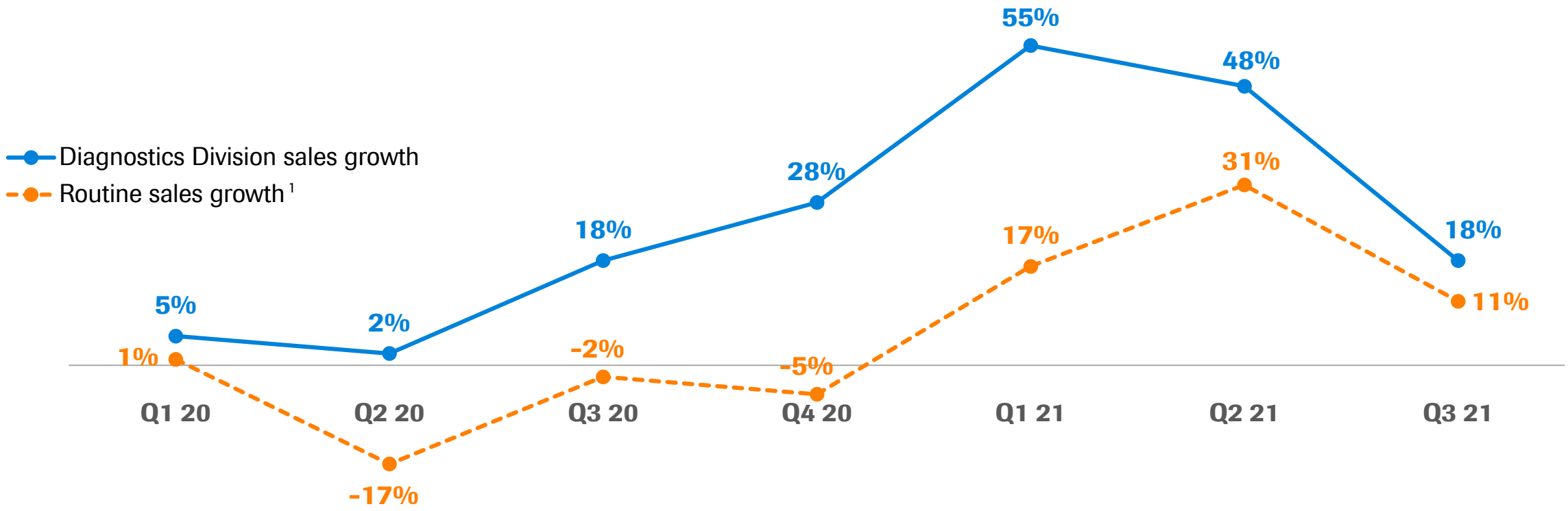
Very strong growth driven by COVID-19 and routine testing

	2021 CHFm	2020 CHFm	Change in % CHF	Change in % CER
Diagnostics Division	**13,305**	**9,662**	**38**	**39**
Core Lab	5,610	4,487	25	26
Molecular Lab	3,454	2,578	34	36
Point of Care	2,058	541	280	279
Diabetes Care	1,294	1,261	3	4
Pathology Lab	889	795	12	14

CER=Constant Exchange Rates; underlying growth of Core Lab excluding Roche Information Solutions: +25%

Diagnostics Division sales growth by quarter

Maintaining strong routine testing growth

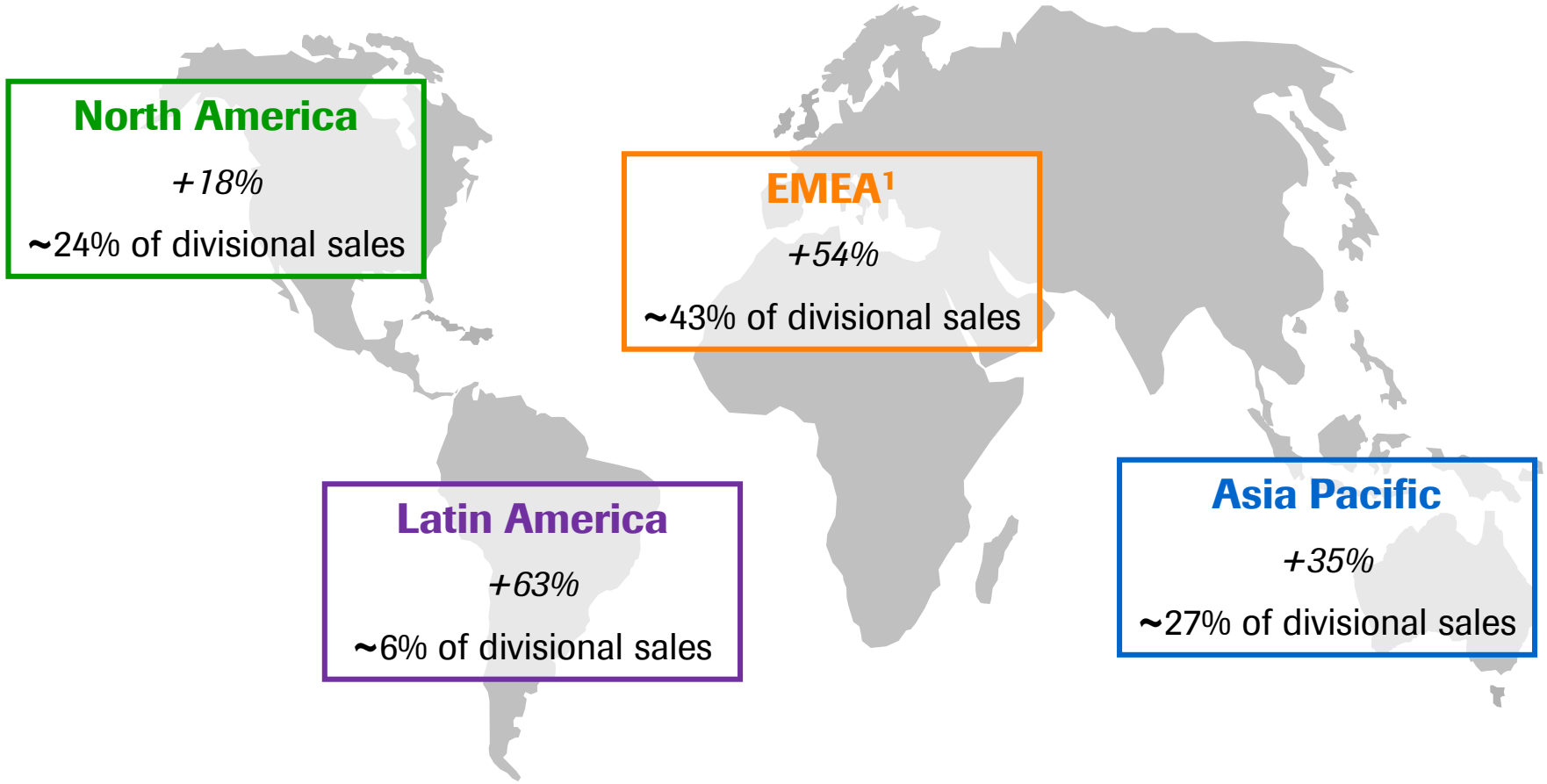


COVID-19 sales	Q1: 0.1bn	Q2: 0.6bn	Q3: 0.6bn	Q4: 1.1bn	Q1: 1.2bn	Q2: 1.3bn	Q3: 1.0bn

Growth rates at CER (Constant exchange Rates); [1] Quarterly sales growth excluding COVID-19 sales

YTD Sep 2021: Diagnostics Division regional sales

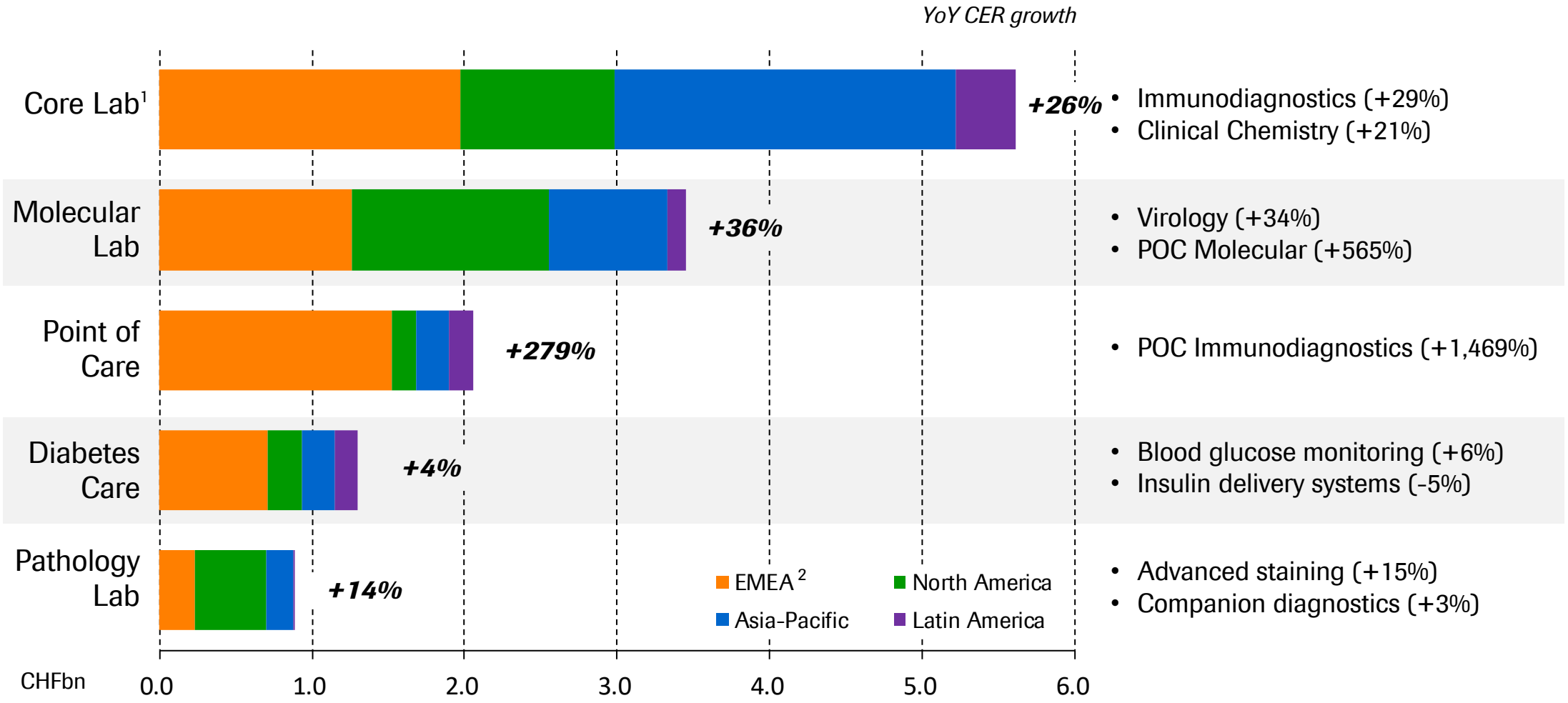
Very strong growth in all regions



Growth rates at CER (Constant exchange Rates); [1] Europe, Middle East and Africa

YTD Sep 2021: Diagnostics Division highlights

Very strong growth across all businesses



- Immunodiagnostics (+29%)
- Clinical Chemistry (+21%)

- Virology (+34%)
- POC Molecular (+565%)

- POC Immunodiagnostics (+1,469%)

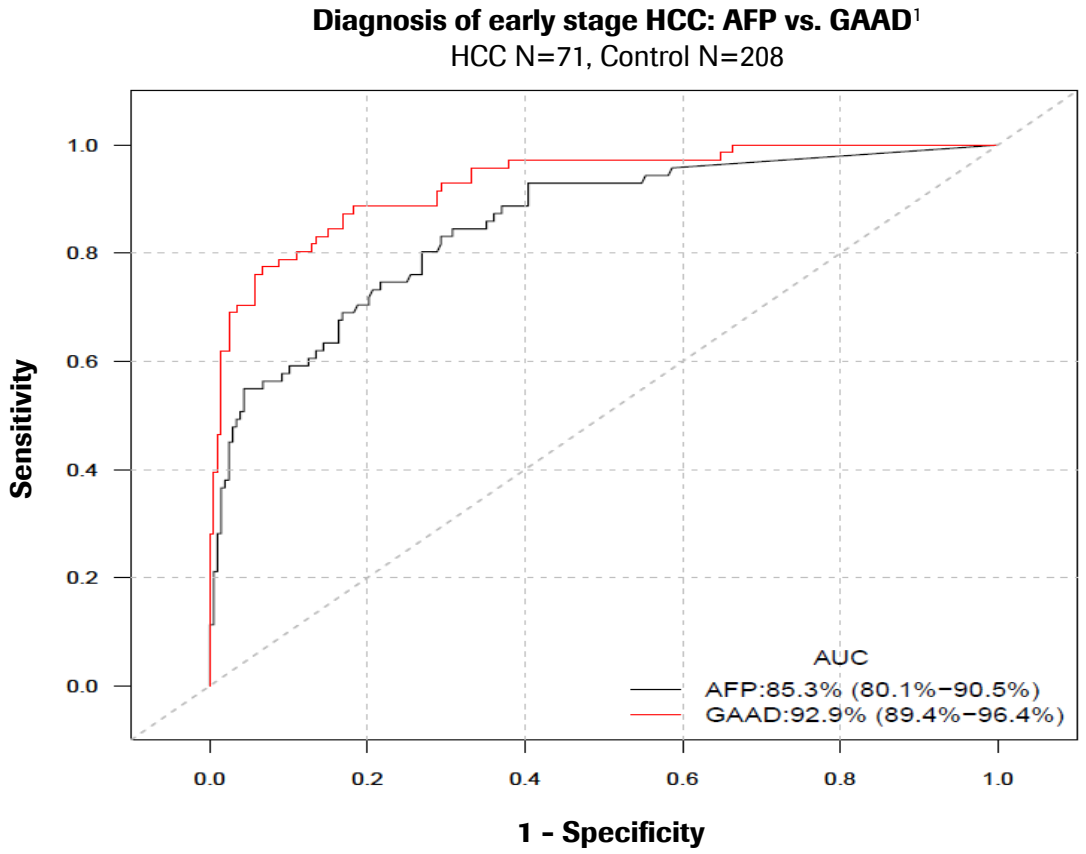
- Blood glucose monitoring (+6%)
- Insulin delivery systems (-5%)

- Advanced staining (+15%)
- Companion diagnostics (+3%)

CER=Constant Exchange Rates; POC=point of care; [1] Underlying growth of Core Lab excluding Roche Information Solutions: +25%; [2] EMEA=Europe, Middle East and Africa

Elecsys® GAAD receives CE mark

First IVD algorithm for early detection of hepatocellular carcinoma



- 830K deaths per year caused by hepatocellular carcinoma[2]
- Algorithm combines gender and age with the results of two blood-based biomarkers (Elecsys® AFP and PIVKA-II)
- Early detection allows for potentially curative therapy with considerable improvement in survival: 5-year survival ranges up to 80% (vs 5% in general HCC population)[3] [4]
- Elecsys® GALAD in development for CE launch in 2022

GAAD=Gender, Age, AFP and PIVKA-II (DCP); GALAD=Gender, Age, AFP, AFP-L3 and PIVKA-II (DCP); AFP=Alfa-fetoprotein; HCC=hepatocellular carcinoma; PIVKA-II=protein induced by vitamin K absence-II; AUC=area under the curve; BDD=Breakthrough Device Designation; [1] Henry Chan et al. Performance Evaluation of the Elecsys® GAAD Assay for the Detection of Hepatocellular Carcinoma Across Different Disease Stages and Etiologies Presented at ISHVLD; [2] WHO: Globocan 2020; [3] Hashem B. El-Serag, Therap Adv Gastroenterol. 2011 Jan; 4(1): 5–10; [4] Ju Dong Yang. Detect or not to detect very early stage hepatocellular carcinoma? The western perspective. Clinical and Molecular Hepatology 2019;25:335-343

Claim extension of Elecsys® Brahms PCT assay

Monitoring patients on antibiotic therapies improves outcomes and reduces cost of care

Higher patient impact
Strongly increasing our outreach

50 million[1]

Diagnosis
Severe bacterial infection

+

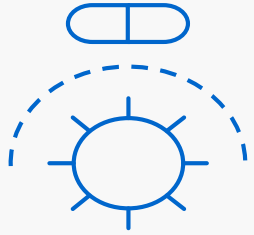
NEW

420 million[2]

Monitoring
Antibiotic therapy

More patient benefit
Better care and treatment for patients on antibiotics

Targeted use of antibiotics



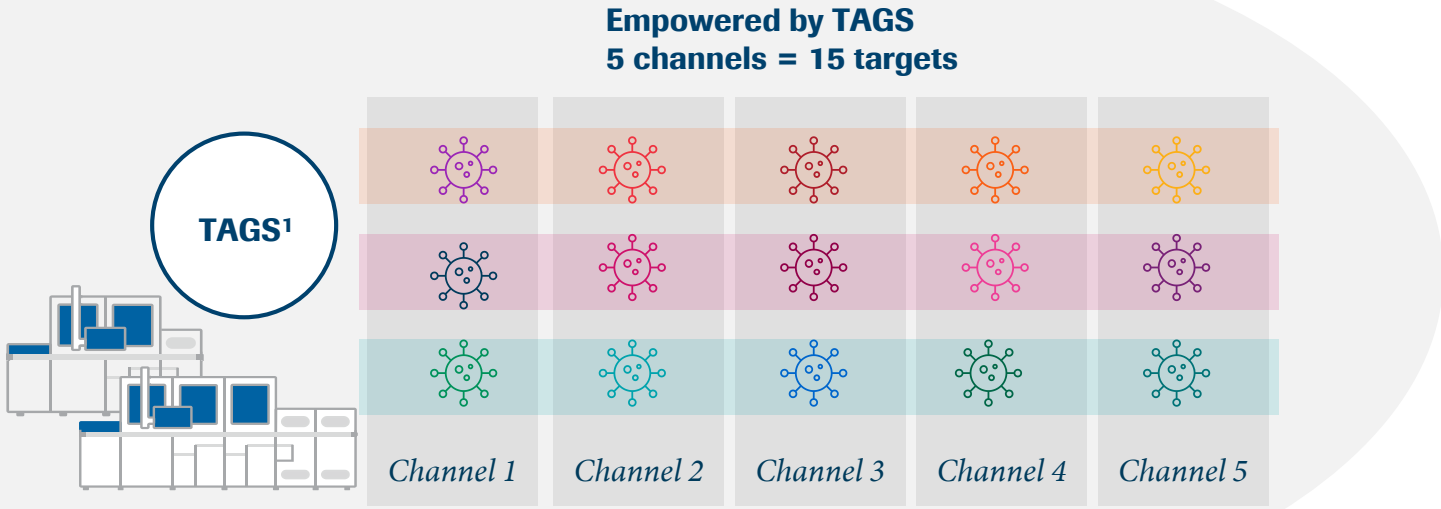
Helping to **combat** resistance

Reducing **unnecessary** cost

PCT=Procalcitonin; [1] Rudd et al (2020), calculation based on sepsis which is a severe bacterial infection. Lancet 395(10219):200-211; [2] Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017

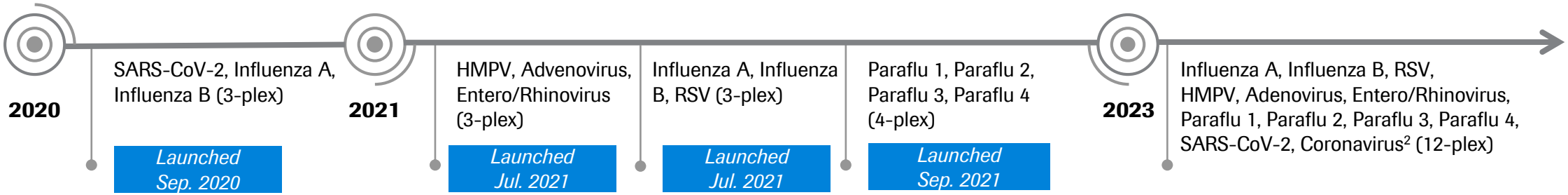
Launch of three respiratory test panels on cobas 6800/8800

Breaking the barriers of syndromic testing



- High unmet medical need: differential diagnosis between viruses
- Utilizes the cobas® 6800/8800 installed base

Respiratory Panels Timeline (*launch timing per year is illustrative*):



[1] TAGS=Temperature Activated Generation of Signal; [2] Common cold coronaviruses including HKU1, OC43, NL63, 229E

Definitive share purchase agreement with TIB Molbiol[1]

>45 CE IVD & >100 RUO tests available on existing Roche platforms

Respiratory				
Coronavirus	**Mutations**	**Mutations Cont.**	**Influenza**	**Resp. Virus**
MERS Coronavirus UpE	SARS-CoV-2 Spike A23063T N501Y	SARS-CoV-2 Spike D253G	Influenza A*	Enterovirus*
MERS Coronavirus Orf1a	SARS-CoV-2 Spike del H69_V7	SARS-CoV-2 Spike L452R	Influenza A H1 (H1N1)*	Parechovirus (hPeV)*
Coronavirus HKU1	SARS-CoV-2 Spike D614G	SARS-CoV-2 Spike P681R	Influenza A H3	Metapneumovirus (hMPV)*
Coronavirus OC43	SARS-CoV-2 Spike Y453F (mink)	SARS-CoV-2 Spike E484Q	Influenza A H5	Bocavirus (hBoV)*
Coronavirus 229E	SARS-CoV-2 Spike P681H	SARS-CoV-2 Spike D253G	Influenza A H7 (H7N9)	Respiratory Syncytial Virus (RSV)*
Coronavirus NL63	SARS B117 (Spike del+501)	**Parainfluenza**	Influenza A H7 (H7N9) (640)	**Atypical Pneumonia**
panCoronavirus	SARS B1351 (484K+501Y)	Parainfluenza 4 (hPIV-4) NP gene*	Influenza A H9	Pneumocystis jirovecii (PCP)
SARS-CoV-2 (COVID-19) N-gene	SARS-CoV-2 Spike E484K	Parainfluenza 3 (hPIV-3) M gene*	Influenza B*	Mycoplasma pneumoniae
SARS-CoV-2 (COVID-19) E-gene*	SARS-CoV-2 Spike A570D	Parainfluenza 2 (hPIV-2) L gene*	**Resp. Bacteria**	Chlamydophila psittaci
SARS-CoV-2 (COVID-19) E+N-gene	SARS-CoV-2 Spike K417N	Parainfluenza 1 (hPIV-1) HN gene*	Bordetella pertussis	Chlamydia pneumoniae
SARS-CoV-2 (COVID-19) RdRP-gene	SARS-CoV-2 Spike V1176F	Parainfluenza (PIV-1,2,3,4)	Bordetella parapertussis	Legionella pneumophila
	SARS del69,70 +484K+501Y			

Gastroenteritis		
Parasites	**Bacteria**	**Virus**
Giardia*	Aeromonas*	Norovirus GG1*
Dientamoeba*	Yersinia*	Norovirus GG2*
Cryptosporidium*	Campylobacter*	Rotavirus A*
Blastocystis*	Shigella*	Adenovirus F (40,41)*
Entamoeba histolytica*	Salmonella*	Astrovirus*
	Plesiomonas	Sapovirus*
		Enterovirus*

MagNA Pure

LightCycler

Installed base

>2,000	>14,500

Carbapenemase
KPC
NDM1
OXA-48
OXA-23
GES
IMP
VIM

Antimicrobial Resistance
Mycoplasma Macrolide
MCR-1*

New Born
TREC
KREC

Filovirus
Ebola Zaire*

Tropical
Zika*
Dengue
Chikungunya
Plasmodium genus

EHEC
STX1-EHEC
STX2-EHEC
EAE-EHEC

Non-Culturable
T. Whipplei

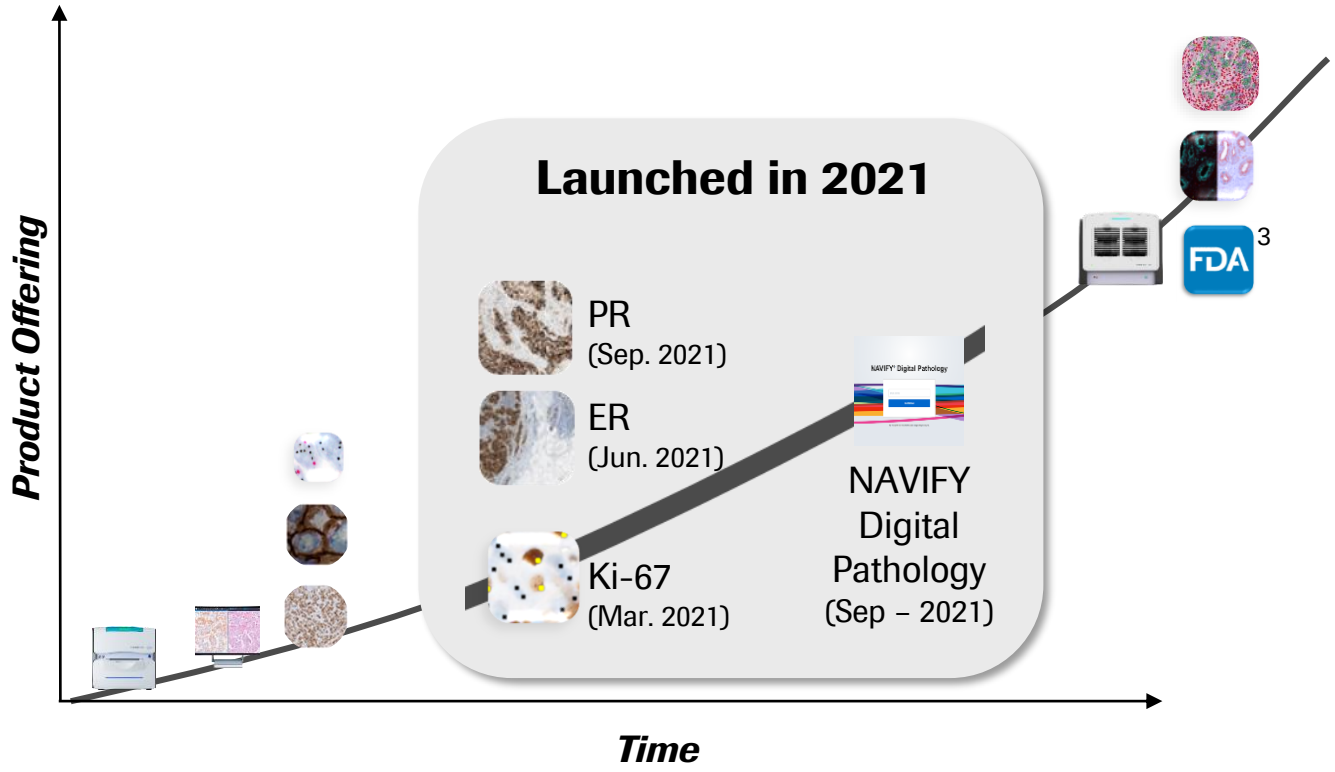
Bac. Meningitis
Escherichia coli uidA
Listeria monocytogenes
Streptococcus pneumoniae
Neisseria meningitidis
Streptococcus agalactiae
Haemophilus influenzae

[1] subject to regulatory clearance and closing; * CE-marked; RUO=Research Use Only

Roche Digital Pathology

Launching new breast panel algorithms and providing a powerful open environment for AI integration for pathologists

Expanding portfolio offering



- Enables the integration of third party algorithms into the NAVIFY Digital Pathology software[1]
- Provides a broader set of diagnostic tools both on premise and via cloud
- New Roche algorithms use whole slide analysis with state of the art deep learning AI
- Complete breast cancer algorithm panel [2] allows for faster and more accurate diagnosis

AI=Artificial Intelligence; [1] First two agreements signed with PathAI and IBEX; [2] HER2 (4b5), Ki-67, ER, PR and HER2 Dual ISH algorithms; [3] Will be seeking FDA clearance of Breast Panel algorithms with external clinical studies in 2022

Key launches 2021

Area		Product	Description	Market[1]	
Instruments	Core Lab	cobas® pure integrated solutions	Low-to-medium volume SWA	CE	✓
		cobas® pro integrated solutions	New high throughput configurations of the cobas pro instrument	US & CE	✓
	Point of Care	cobas® pulse	Successor of Accu-Chek® Inform II	CE	
	Molecular Lab	cobas® 5800	Fully automated low throughput PCR system	CE	
		AVENIO Edge System	Automated sequencing library preparation and target enrichment instrument	WW	
	Diabetes Care	Accu-Chek Instant	New features for the monitoring system to increase performance and user experience	WW	✓
Tests	Core Lab	Elecsys® SARS-CoV-2 Antigen	Automated laboratory assay intended as an aid in the diagnosis of SARS-CoV-2 infection	US	
		Elecsys® NT-proBNP IU • extensions in Heart Failure • extension for Atrial Fibrillation Elecsys® TnT–hs 3 claim extensions in Coronary Arterial Disease	A set of 5 intended use extensions in the Coronary Arterial Disease, Atrial Fibrillation and Heart Failure Space	CE	✓
	Molecular Lab	AVENIO FoundationOne kit (RUO)	Decentralized kit of the FoundationOne test	WW	
		KAPA HyperPETE kit	New targeted sequencing portfolio using primer extension for small targets	WW	
Digital Solutions	Pathology Lab	uPath 2.0	First IVD release and version of Open API of the clinical pathologist workflow module for NAVIFY Digital Pathology & on-premise uPath	WW	✓
		RUO Algorithms	Whole slide image analysis algorithms (ER (SP1), Ki-67 (30-9), and PR (1E2))	WW	✓
	Insights	NAVIFY Oncology 1.0	Modular Oncology decision support solution	WW[3]	
		NAVIFY Pass 1.0	Solution for providers to communicate SARS-CoV-2 rapid antigen test results to a mobile app	US & CE[3]	✓
	Core Lab	Elecsys® GAAD Algorithm	Algorithm for early detection of HCC in patients with chronic liver disease.	CE	✓
	Diabetes Care	RocheDiabetes RemoteCare	Module within the RocheDiabetes Care Platform enabling remote interactions between HCPs and patients, including a patient dashboard, check-in and chat functionality	WW[3]	
		Accu-Chek SugarView	Meter-free blood glucose testing using a smartphone app and test strips	OUS[3]	✓

RDCP=Roche Diabetes Care Platform; [1] CE=European Conformity, US=FDA approval, WW=Worldwide, OUS=Outside the US; [2] Research Use Only; [3] Only a few selected countries

Finance

Alan Hippe
Chief Financial Officer

YTD Sep 2021: Highlights

Sales

- Group sales growth (+8%) driven by Diagnostics (+39%)

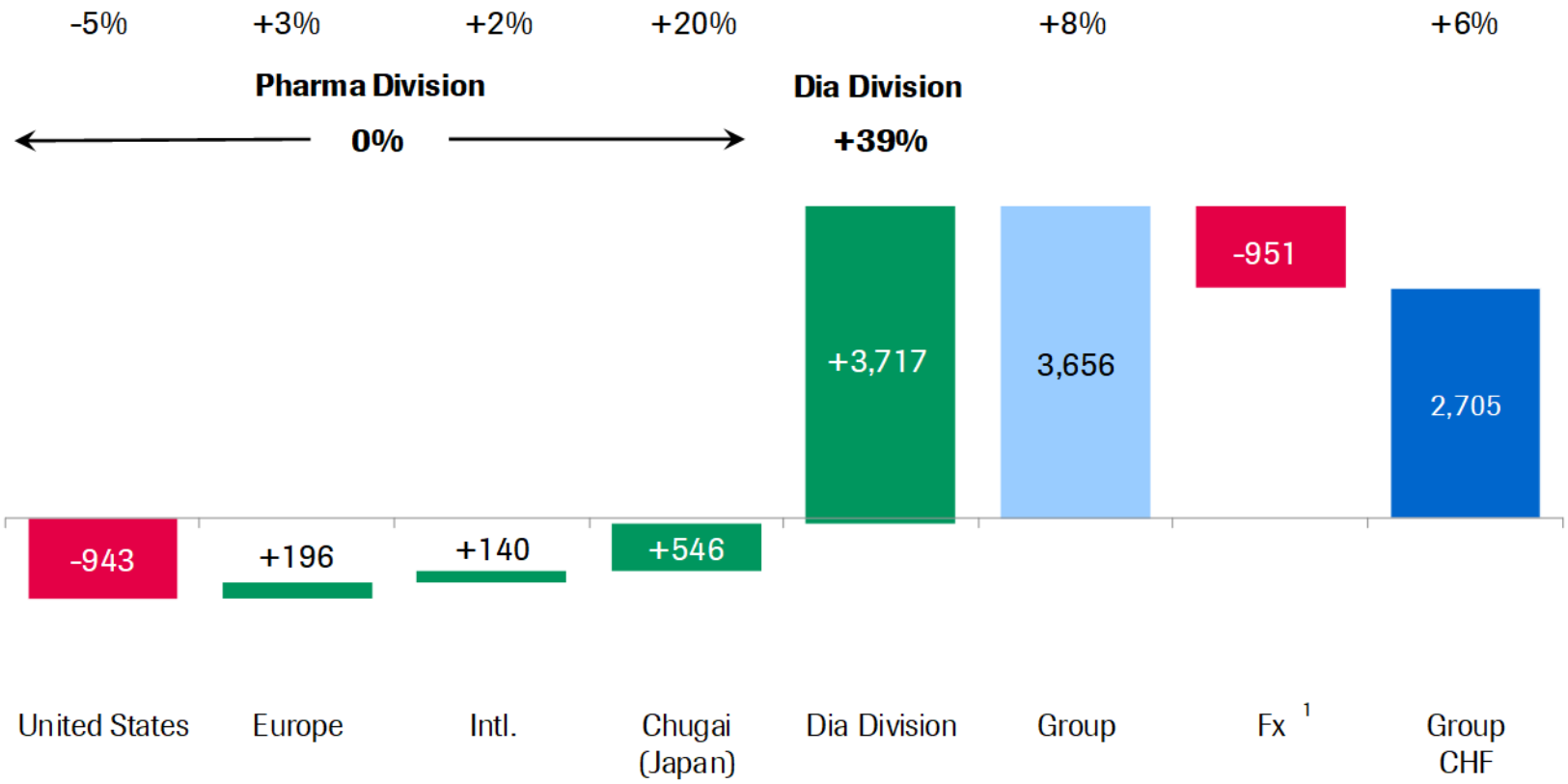
Currency impact on sales

- Negative currency impact due to most currencies, particularly USD

Growth rates at CER (Constant exchange Rates)

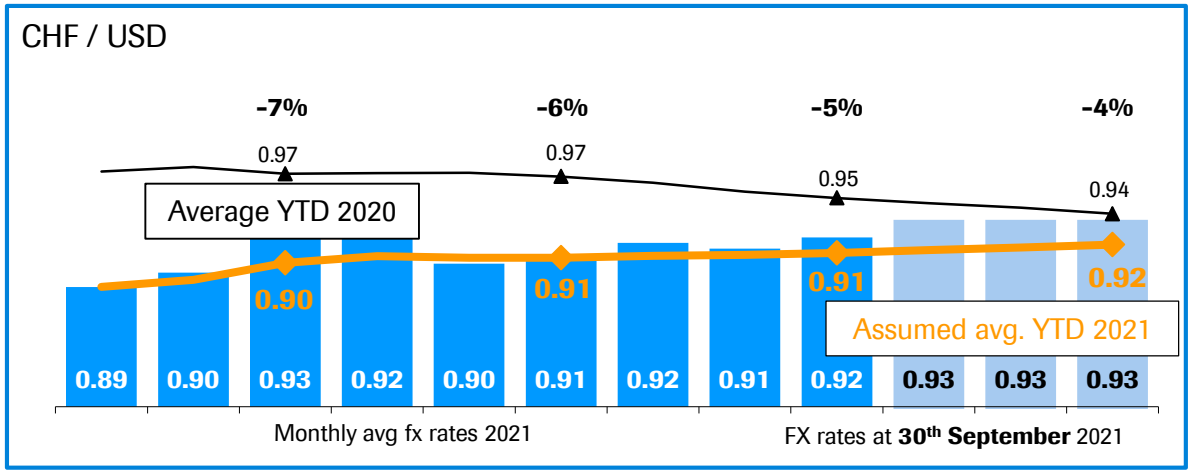
YTD Sep 2021: Group Sales

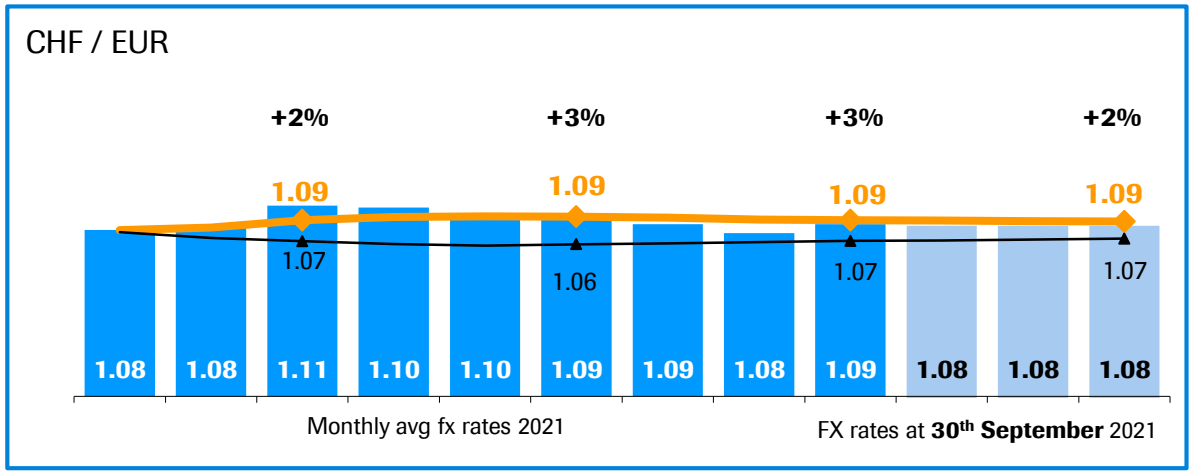
CER sales up by +8% driven by Diagnostics Division



Absolute values in CHFm at Constant Exchange Rates (avg full year 2020); [1] avg. full year 2021 to avg. YTD September 2021 fx impact

Currency impact expected to reduce as 2021 progresses





Assuming the 30 Sep 2021 exchange rates remain stable until end of 2021, 2021 impact [1] is expected to be (%p):

	Q1	HY	Sep YTD	FY
Sales	-4	-3	-2	-1
Core operating profit		-5		-2
Core EPS		-5		-2

[1] On group growth rates

Upcoming Virtual Event

Digitalization along the value chain

Wednesday, 17 November 2021
16:00 - 17:30 CET / 15:00 - 16:30 GMT

Presenters:
Alan Hippe, Chief Financial and IT Officer Roche
Mark McCarthy, Executive Director Human Genetics, gRED
Christian Gossens, Digital Biomarkers, Global Area Head, pRED
Jacqueline Law, Vice President, Head of Corporate Strategy, Flatiron Health
Steve Guise, Global Head, Pharma Informatics
Moritz Hartmann, Global Head of Roche Information Solutions, Roche Diagnostics

2021 outlook raised

Sales growth to "mid-single digit" from "low- to mid-single digit"

Group sales growth[1]	• Mid-single digit (from low- to mid-single digit)
Core EPS growth[1]	• Broadly in line with sales growth
Dividend outlook	• Further increase dividend in Swiss francs

[1] At Constant Exchange Rates (CER); based on the current assessment of the COVID-19 impact

Changes to the development pipeline
Q3 2021 update

New to phase I

2 NMEs:
RG6035 brainshuttle (BS)-CD20 - multiple sclerosis
RG6440 TGFβ (SOF10) - solid tumors

New to phase II

2 NMEs:
RG6149 astegolimab (Anti-ST2) - chronic obstructive pulmonary disease
RG6416 bepranemab (Anti-tau) - AD

New to phase III

2 AIs:
RG6171 giredestrant (SERD) – ER+ adj BC
RG6168 Enspryng – Myasthenia Gravis

New to registration

1 NME:
RG6413+RG6412 Ronapreve SARS-CoV-2 prophylaxis and ambulatory (EU)

1 AI:
RG1569 Actemra COVID-19 pneumonia (EU)

Removed from phase I

Removed from phase II

Removed from phase III

Approvals

1 AI approved in US:
RG7446 Tecentriq NSCLC adj

Status as of October 20, 2021

Roche Group development pipeline

Phase I (41 NMEs + 12 AIs)

RG6007	HLA-A2-WT1 x CD3	AML
RG6026	glofitamab monotherapy and combos	heme tumors
RG6058	tiragolumab combos	heme & solid tumors
RG6076	CD19-4-1BBL	heme tumors
RG6115	TLR7 agonist (4)	HCC
RG6160	cevostamab (FcRH5 x CD3)	r/r MM
RG6171	giredestrant (SERD)	ER+/HER2- BC
RG6180	autogene cevumeran±T	solid tumors
RG6185	belvarafenib (pan-RAF inh)+Cotellic	solid tumors
RG6189	FAP-CD40	solid tumors
RG6194	runimotamab (HER2 x CD3)	BC
RG6232	TYRP1 x CD3	metastatic melanoma
RG6234	-	multiple myeloma
RG6279	PD1-IL2v	solid tumors
RG6286	-	colorectal cancer
RG6290	MAGE-A4 ImmTAC	solid tumors
RG6292	CD25 MAb ± T	solid tumors
RG6323	IL15/IL15Ra-Fc	solid tumors
RG6330	KRAS G12C	solid tumors
RG6433	SHP2i	solid tumors
RG6440	TGFβ (SOF10)	solid tumors
RG7440	ipatasertib + rucaparib	mCRPC, solid tumors
	ipatasertib	prostate cancer, pretreated
RG7446	Morpheus platform	solid tumors
	T + Venclexta	maintenance 1L ES-SCLC
RG7601	Venclexta + AMG176	AML
	Venclexta ± azacitidine	r/r MDS
	Venclexta + gilteritinib	r/r AML
RG7802	cibisatamab ± T	solid tumors
RG7827	FAP-4-1BBL + combos	solid tumors
RG7828	mosunetuzumab monotherapy + combos	heme tumors

T=Tecentriq, BS=Brain shuttle

CHU	FIXa x FX	haemophilia
CHU	glypican-3 x CD3	solid tumors
CHU	codrituzumab	HCC
CHU	CD137 switch antibody	solid tumors
CHU	-	solid tumors & endometriosis
SQZ	PBMC vaccine	solid tumors
RG6287	-	IBD
RG6418	NLRP3 inh	inflammation
RG6315	-	immunologic disorders
RG6006	Abx MCP	bacterial infections
RG6084	PD-L1 LNA	HBV
RG6338	-	metabolic diseases
RG6035	BS-CD20	multiple sclerosis
RG6091	UBE3A LNA	Angelman syndrome
RG6182	-	neurodegenerative diseases
RG6237	-	neuromuscular disorders
RG7637	-	neurodevelopmental disorders
RG6120	VEGF-Ang2 DutaFab	nAMD
RG6179	-	DME
RG6312	-	geographic atrophy
RG7921	-	nAMD
CHU	PTH1 recep. ago	hypoparathyroidism

New Molecular Entity (NME)
Additional Indication (AI)
Oncology / Hematology
Immunology
Infectious Diseases

Metabolism
Neuroscience
Ophthalmology
Other

RG-No - Roche/Genentech
CHU - Chugai managed
IONIS – IONIS managed

SQZ - SQZ Biotechnology managed

[1]One AI combination previously contributing as two entities
[2]combination platform

Phase II (26 NMEs + 12 AIs)

RG6058	tiragolumab + T	NSCLC
	tiragolumab + T + chemo	1L non-squamous NSCLC
	tiragolumab + T + chemo	neoadj-adj NSCLC
	tiragolumab + T	cervical cancer
	tiragolumab + T	1L PD-L1+ mSCCHN
RG6139	PD1 x LAG3	solid tumors
RG6171	giredestrant (SERD)	neoadjuvant ER+ BC
	giredestrant (SERD)	2/3L ER+/HER2- mBC
RG6180	autogene cevumeran + pembrolizumab	1L melanoma
RG6354	rhPTX-2 (PRM-151)	myelofibrosis
RG6357	SPK-8011	hemophilia A
RG6358	SPK-8016	hemophilia A with inhibitors to factor VIII
RG7601	Venclexta + carfilzomib	r/r MM t(11;14)
RG7769	PD1 x TIM3	solid tumors
CHU	Oncolytic Type 5 adenovirus	esophageal cancer
RG6149	astegolimab (Anti-ST2)	COPD
RG6173	anti-tryptase	asthma
RG7835	IgG-IL2	autoimmune diseases
RG7880	efmarodocokin alfa	inflammatory diseases
IONIS	ASO factor B	IgA nephropathy
RG6413+RG6412[1]	Ronapreve	SARS-CoV-2 hospitalised
RG7854/RG7907/ RG6346[2]	TLR7 ago(3)/CpAM (2)/siRNA	HBV
RG6359	SPK-3006	Pompe disease
RG7992	FGFR1 x KLB MAb	NASH
RG6100	semorinemab	Alzheimer's
RG6102	BS-gantenerumab	Alzheimer's
RG6416	bepranemab	Alzheimer's
RG6356	micro-dystrophin (SRP-9001)	DMD
RG7412	crenezumab	familial Alzheimer's healthy pts
RG7816	GABA Aa5 PAM	ASD
RG7906	ralmitaront	schizophrenia
RG7935	prasinezumab	Parkinson's
RG6147	HtrA1	geographic atrophy
RG6367	SPK-7001	choroideremia
RG7774	-	retinal disease
IONIS	ASO factor B	geographic atrophy

Status as of October 20, 2021

Roche Group development pipeline

Phase III (13 NMEs + 39 AIs)

RG3502	Kadcyla + T	2L+ HER-2+ PD-L1+ mBC
	Kadcyla + T	HER-2+ eBC high-risk
RG6013	Hemlibra	mild to moderate hemophilia A
RG6026**	glofitamab + chemo	2L+ DLBCL
RG6058	tiragolumab + T + chemo	1L SCLC
	tiragolumab + T	1L PD-L1+ NSCLC
	tiragolumab + T	locally advanced esophageal cancer
	tiragolumab + T	1L esophageal cancer
	tiragolumab + T	stage III unresectable 1L NSCLC
RG6107	crovalimab	PNH
RG6114	inavolisib (mPI3K alpha inh)	1L HR+ mBC
RG6171	giredestrant (SERD)	ER+/HER2- mBC
	giredestrant (SERD)	adj ER+ BC
RG6268	Rozlytrek ROS1+	1L NSCLC
RG7440	ipatasertib + abiraterone	1L CRPC
RG7596	Polivy	1L DLBCL
RG7446	Tecentriq + platinum chemo	NSCLC neoadj
	Tecentriq	NMIBC, high risk
	Tecentriq	RCC adj
	Tecentriq + cabozantinib	advanced RCC
	Tecentriq + cabozantinib	2L NSCLC
	T ± chemo	SCCHN adj
	T + capecitabine or carbo/gem	1L TNBC
	T + paclitaxel	TNBC adj
	T + Avastin	HCC adj
	T ± chemo	1L mUC
	Tecentriq	SC NSCLC
	Tecentriq	ctDNA+ high-risk MIBC

RG7601	Venclexta	r/r MM t(11:14)
	Venclexta + azacitidine	1L MDS
RG7828**	mosunetuzumab + lenalidomide	2L+ FL
RG7853	Alecensa	ALK+ NSCLC adj
RG3648	Xolair	food allergy
RG6354	rhPTX-2 (PRM-151)	idiopathic pulmonary fibrosis
RG7159	Gazyva	lupus nephritis
	Gazyva	membranous nephropathy
RG7413	etrolizumab	Crohn's
RG6152	Xofluza	influenza, pediatric (0-1 year)
	Xofluza	influenza, pediatric (1-12 years)
	Xofluza	influenza direct transmission
RG6422	AT-527	SARS-CoV-2
RG1450	gantenerumab	Alzheimer's
RG1594	Ocrevus higher dose	RMS & PPMS
RG6042	tominersen	Huntington's
RG6168	Enspryng	Myasthenia Gravis
RG7845	fenebrutinib	PPMS
RG7845	fenebrutinib	RMS
RG6321	port delivery system with ranibizumab	DME
	port delivery system with ranibizumab	DR
	port delivery system with ranibizumab	wAMD, 36-week
RG7716	faricimab	BRVO
	faricimab	CRVO

T=Tecentriq
*One NME combination previously contributing as two entities
** phI safety run-in ongoing

Registration (4 NMEs + 4 AIs)

RG6396	Gavreto (pralsetinib)[1]	RET+ NSCLC
	Gavreto (pralsetinib)[2]	RET+ MTC
RG7446	Tecentriq[2]	NSCLC adj
RG6321	port delivery system with ranibizumab	wAMD
RG7716	faricimab	DME
	faricimab	wAMD
RG6413+ RG6412*	Ronapreve[3]	SARS-CoV-2 prophylaxis and ambulatory
RG1569	Actemra[3]	COVID-19 pneumonia

[1] Approved in US, filed in EU
[2] Approved in US
[3] Filed in the EU

New Molecular Entity (NME)
Additional Indication (AI)
Oncology / Hematology
Immunology
Infectious Diseases
Metabolism
Neuroscience
Ophthalmology
Other

Status as of October 20, 2021

NME submissions and their additional indications

Projects in phase II and III

2021		2022		2023		2024 and beyond					
RG7828	**mosunetuzumab** 3L+ FL	RG6026	**glofitamab** 3L+ DLBCL	RG6058	**tiragolumab + T** 1L PD-L1+ NSCLC	RG6026	**glofitamab + chemo** 2L DLBCL	RG6180	**autogene cevumeran** 1L melanoma		
RG6413+ RG6412	**Ronapreve** SARS-CoV-2 prophylaxis and ambulatory ✓	RG6058	**tiragolumab + Tecentriq (T)** 1L SCLC	RG6058	**tiragolumab + T** 1L esophageal cancer[1]	RG6058	**tiragolumab + T** 1L PD-L1+ cervical ca	RG6354	**rhPTX-2 (PRM-151)** myelofibrosis	RG6100	**semorinemab** Alzheimer's
RG6413+ RG6412	**Ronapreve** SARS-CoV-2 hospitalised	RG6107	**crovalimab** PNH[1]	RG6114	**inavolisib** (mPI3K alpha inh) 1L HR+ BC	RG6058	**tiragolumab + T** locally adv esophageal cancer	RG7769	**PD1xTIM3** solid tumors	RG6102	**brain shuttle gantenerumab** Alzheimer's
RG6321	**port delivery system with ranibizumab** wAMD ✓	RG6171	**giredestrant (SERD)** 2L/3L ER+/HER2- mBC	RG6321	**port delivery system with ranibizumab** DME	RG6058	**tiragolumab + T** Stage III unresectable 1L NSCLC	RG7828	**mosunetuzumab + lenalidomide** 2L FL	RG6356	**micro-dystrophin SRP-9001** DMD
RG7716	**faricimab** DME ✓	RG7440	**ipatasertib + abiraterone** 1L CRPC	RG6321	**port delivery system with ranibizumab** DR	RG6058	**tiragolumab + T** 1L non-sq NSCLC	RG6149	**astegolimab (anti-ST2)** COPD	RG7816	**GABA Aa5 PAM** ASD
RG7716	**faricimab** wAMD ✓	RG7413	**etrolizumab** Crohn's	RG7716	**faricimab** BRVO/CRVO	RG6058	**tiragolumab + T** 1L PD-L1+ mSCCHN	RG6173	**Anti-tryptase** asthma	RG7845	**fenebrutinib** PPMS
		RG6422	**AT-527** SARS-CoV-2			RG6058	**tiragolumab+T+/- chemo** neoadj/adj NSCLC	RG6354	**rhPTX-2 (PRM-151)** IPF	RG7845	**fenebrutinib** RMS
		RG1450	**gantenerumab** Alzheimer's			RG6139	**PD1xLAG3** solid tumors	RG7880	**efmarodocokin alfa** (IL22-Fc) inflammatory diseases	RG7906	**ralmitaront** schizophrenia
						RG6171	**giredestrant (SERD)** 1L ER+/HER2- mBC	RG7907/ RG7854/ RG6346	**TLR7 ago (3)/ CpAM (2) /siRNA** HBV	RG7935	**prasinezumab** Parkinson's
						RG6171	**giredestrant (SERD)** Adj ER+ BC	RG7992	**FGFR1 x KLB MAb** NASH	RG6321	**port delivery system with ranibizumab** wAMD, 36-week refill

✓ Indicates submission to health authorities has occurred
Unless stated otherwise submissions are planned to occur in US and EU
[1] First filing in China

New Molecular Entity (NME)
Additional Indication (AI)
Oncology / Hematology
Immunology
Infectious Diseases
Metabolism
Neuroscience
Ophthalmology
Other

Status as of October 20, 2021

AI submissions for existing products

Projects in phase II and III

2021		2022		2023		2024 and beyond			
RG6152	**Xofluza** influenza, pediatric (1-12 yrs)			RG6152	**Xofluza** direct transmission	RG3502	**Kadcyla + Tecentriq** 2L+ HER-2+ PD-L1+ mBC		
RG1569	**Actemra**[1,2] COVID-19 pneumonia ✓	RG6396	**Gavreto (pralsetinib)** Tumour agnostic	RG6152	**Xofluza** influenza, pediatric (0-1 year)	RG3502	**Kadcyla + Tecentriq** HER-2+ eBC high-risk		
RG6013	**Hemlibra** Mild to moderate hemophilia A (EU)	RG7446	**Tecentriq** RCC adj	RG3648	**Xolair** Food allergy	RG7446	**Tecentriq + paclitaxel** TNBC adj	RG7159	**Gazyva** lupus nephritis
RG7446	**Tecentriq** NSCLC adj ✓	RG7446	**Tecentriq ± chemo** 1L mUC	RG7446	**Tecentriq** SC NSCLC	RG7446	**Tecentriq** High risk NMIBC	RG7159	**Gazyva** membranous nephropathy
RG7596	**Polivy** 1L DLBCL	RG7853	**Alecensa** ALK+ NSCLC adj	RG7446	**Tecentriq + cabozantinib** 2L NSCLC	RG7446	**Tecentriq + chemo** SCCHN adj	RG1594	**Ocrevus** higher dose RMS & PPMS
RG6396	**Gavreto (pralsetinib)** RET+ MTC (EU)	RG6268	**Rozlytrek (BFAST)** 1L NSCLC ROS1+	RG7446	**Tecentriq + cabozantinib** adv RCC	RG7446	**Tecentriq** ctDNA+ high-risk MIBC	RG6168	**Enspryng** Myasthenia Gravis
				RG7446	**Tecentriq + Avastin** HCC adj				
				RG7446	**Tecentriq**[2] NSCLC neo adj				
				RG7601	**Venclexta** r/r MM t(11:14)				
				RG7601	**Venclexta + azacitidine** 1L MDS				
				RG7446	**Tecentriq + capecitabine or carbo/gem** TNBC				

New Molecular Entity (NME)
Additional Indication (AI)
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Immunology
Infectious Diseases
Metabolism
Neuroscience
Ophthalmology
Other

✓ Indicates submission to health authorities has occurred
Unless stated otherwise submissions are planned to occur in US and EU
[1]US FDA Emergency Use Authorization received
[2]Filed in the EU; [3]filing timeline based on data from interim analysis;

Status as of October 20, 2021

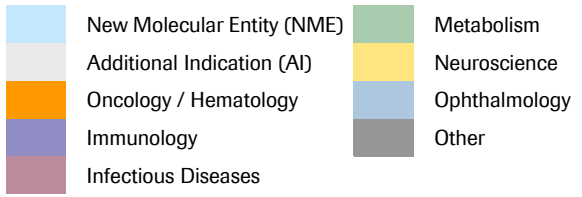
Major pending approvals 2021

US	
RG6321	**PDS with ranibizumab** wAMD Filed April 2021
RG7716	**faricimab** DME Filed May 2021
RG7716	**faricimab** wAMD Filed May 2021

EU	
RG6396	**Gavreto (pralsetinib)** **RET+ NSCLC** Filed May 2020
RG7446	**Tecentriq** NSCLC adj Filed June 2021
RG6321	**PDS with ranibizumab** wAMD Filed April 2021
RG7716	**faricimab** DME Filed May 2021
RG7716	**faricimab** wAMD Filed May 2021
RG6413+ RG6412	**Ronapreve** SARS-CoV-2 prophylaxis and ambulatory Filed Sept 2021
RG1569	**Actemra** COVID-19 pneumonia Filed Sept 2021

China	
RG7446	**Tecentriq** NSCLC adj Filed June 2021

Japan-Chugai	
RG7716	**faricimab** DME Filed June 2021
RG7716	**faricimab** wAMD Filed June 2021
RG7446	**Tecentriq** NSCLC adj Filed July 2021
RG6413+ RG6412	**Ronapreve** SARS-CoV-2 prophylaxis and ambulatory Filed Sept 2021



PDS=port delivery system

Status as of October 20, 2021

Major granted approvals 2021

US

RG7853	**Alecensa (BFAST)** 1L NSCLC ALK+ Jan 2021
RG1569	**Actemra** SSc-ILD March 2021
RG3648	**Xolair** Self-injection April 2021
RG7446	**Tecentriq** NSCLC adj Oct 2021

EU

RG6152	**Xofluza** influenza, otherwise healthy Jan 2021
RG6152	**Xofluza** influenza, high risk Jan 2021
RG6152	**Xofluza** post exposure prophylaxis Jan 2021
RG7916	**Evrysdi** SMA March 2021
RG6168	**Enspryng** NMOSD June 2021
RG7446	**Tecentriq** 1L non-sq + sq NSCLC Dx+ May 2021
RG7601	**Venclexta+ azacitidine** 1L AML May 2021

China

RG6152	**Xofluza** influenza, otherwise healthy April 2021
RG6152	**Xofluza** influenza, high risk April 2021
RG6013	**Hemlibra** Hemophilia A April 2021
RG7446	**Tecentriq** 1L non-sq + sq NSCLC Dx+ April 2021
RG6168	**Enspryng** NMOSD April 2021
RG7916	**Evrysdi** SMA May 2021
RG3502	**Kadcyla** 2L HER2+ BC June 2021
RG7159	**Gazyva** 1L FL and r/r FL June 2021
RG7446	**Tecentriq + pemetrexed** 1L non-sq NSCLC June 2021

Japan-Chugai

RG7596	**Polivy** r/r DLBCL March 2021
RG7916	**Evrysdi** SMA June 2021
RG6413+ RG6412	**Ronapreve** SARS-CoV-2 July 2021
RG105	**Rituxan** systemic sclerosis Sep 2021

New Molecular Entity (NME)
Additional Indication (AI)
Oncology / Hematology
Immunology
Infectious Diseases
Metabolism
Neuroscience
Ophthalmology
Other

Status as of October 20, 2021

Pipeline summary

Marketed products additional indications

Global Development late-stage trials

pRED (Roche Pharma Research & Early Development)

gRED (Genentech Research & Early Development)

Spark

Roche Group YTD Sep 2021 sales

Diagnostics

Foreign exchange rate information

Hemlibra

Factor VIII mimetic for treatment of hemophilia A

Indication	Hemophilia A patients without inhibitors to factor VIII	Hemophilia A patients with and without inhibitors to Factor VIII, dosing every 4 weeks
Phase/study	**Phase III HAVEN 3**	**Phase III HAVEN 4**
# of patients	N=135	N=46
Design	Patients on FVIII episodic treatment prior to study entry: ▪ **ARM A:** Hemlibra prophylaxis qw ▪ **ARM B:** Hemlibra prophylaxis q2w ▪ **ARM C:** Episodic FVIII treatment; switch to Hemlibra prophylaxis possible after 24 weeks Patients on FVIII prophylaxis prior to study entry: ▪ **ARM D:** Hemlibra prophylaxis qw	Multicenter, open-label, non-randomized study to assess the efficacy, safety, pharmacokinetics, and pharmacodynamics of Hemlibra administered every 4 weeks. ▪ **Part 1:** Pharmacokinetic (PK) run-in part (N=6) ▪ **Part 2:** Expansion part (N=40)
Primary endpoint	▪ Number of bleeds over 24 weeks	▪ Number of bleeds over 24 weeks
Status	▪ FPI Q3 2016, recruitment completed Q2 2017 ▪ Study met primary and key secondary endpoints Q4 2017 ▪ FDA granted Breakthrough Therapy Designation April 2018 ▪ Data presented at WFH 2018 ▪ Filed in US (priority review) and EU in Q2 2018 ▪ Data published in *NEJM* 2018; 379: 811-822	▪ FPI Q1 2017, recruitment completed Q2 2017 ▪ PK run-in data at ASH 2017 ▪ Positive interim analysis outcome reported Q4 2017 ▪ Data presented at WFH 2018 ▪ Interim data filed in US and EU in Q2 2018 ▪ Data published in Lancet Haematology 2019 Jun;6(6):e295-e305
	▪Approved in US Q4 2018 and EU Q1 2019	
CT Identifier	NCT02847637	NCT03020160

In collaboration with Chugai

ASH=American Society of Hematology; WFH=World Federation of Hemophilia; *NEJM*=New England Journal of Medicine

Hemlibra

Factor VIII mimetic for treatment of hemophilia A

Indication	Hemophilia A patients with and without inhibitors to Factor VIII	Hemophilia A mild to moderate patients without inhibitors to Factor VIII
Phase/study	**Phase III** **HAVEN 5**	**Phase III** **HAVEN 6**
# of patients	N=85	N=70
Design	Patients with Hemophilia regardless of FVIII inhibitor status on prophylactic or episodic treatment prior to study entry: ▪ **Arm A**: emicizumab prophylaxis qw ▪ **Arm B**: emicizumab prophylaxis q4w ▪ **Arm C**: No prophylaxis (control arm)	Multicenter, open-label study to evaluate the safety, efficacy, pharmacokinetics, and pharmacodynamics of Hemlibra in patients with mild or moderate Hemophilia A without FVIII inhibitors
Primary endpoint	▪ Number of bleeds over 24 weeks	▪ Safety and efficacy
Status	▪ FPI Q2 2018 ▪ Recruitment completed Q1 2019 ▪ Filed in China Q2 2020 ▪ Approved in China Q2 2021	▪ FPI Q1 2020 ▪ Recruitment completed Q1 2021
CT Identifier	NCT03315455	NCT04158648

In collaboration with Chugai

Alecensa

New CNS-active inhibitor of anaplastic lymphoma kinase

Indication	Treatment-naïve ALK+ advanced NSCLC	Adjuvant ALK+ NSCLC
Phase/study	**Phase III ALEX**	**Phase III ALINA**
# of patients	N=286	N=255
Design	▪ **ARM A:** Alecensa 600mg BID ▪ **ARM B:** Crizotinib 250mg BID	▪ **ARM A:** Alecensa 600 mg BID ▪ **ARM B:** Platinum-based chemotherapy
Primary endpoint	▪ Progression-free survival	▪ Disease-free survival
Status	▪ Recruitment completed Q3 2015 ▪ Primary endpoint met Q1 2017 ▪ Data presented at ASCO 2017, 2018, ESMO 2017, 2018 ▪ Data published in *NEJM* 2017; 377:829-838 ▪ CNS data presented at ESMO 2017 ▪ Final PFS and updated OS presented at ESMO 2019 ▪ Approved in US Q4 2017 (priority review) and in EU Q4 2017	▪ FPI Q3 2018
CT Identifier	NCT02075840	NCT03456076

In collaboration with Chugai

NSCLC=non-small cell lung cancer; ASCO=American Society of Clinical Oncology; *NEJM*=New England Journal of Medicine; ESMO=European Society for Medical Oncology

Kadcyla

First ADC for HER2-positive breast cancer

Indication	HER2-positive early breast cancer high-risk patients	2L+ HER-2 positive PD-L1 positive mBC	HER2-positive early breast cancer high-risk patients
Phase/study	**Phase III KATHERINE**	**Phase III KATE 3**	**Phase III ASTEFANIA**
# of patients	N=1,484	N=350	N=1,590
Design	▪ **ARM A:** Kadcyla 3.6mg/kg q3w ▪ **ARM B:** Herceptin	▪ **ARM A:** Kadcyla plus Tecentriq ▪ **ARM B:** Herceptin plus placebo	▪ **ARM A:** Kadcyla plus Tecentriq ▪ **ARM B:** Kadcyla plus placebo
Primary endpoint	▪ Invasive disease-free survival	▪ Progression-free survival and overall survival	▪ Invasive disease-free survival
Status	▪ Recruitment completed Q4 2015 ▪ Stopped at pre-planned interim data analysis for efficacy Q4 2018 ▪ Data presented at SABCS 2018 ▪ BTD granted by FDA in Q1 2019 ▪ US filling completed under RTOR Q1 2019 and filed in EU Q1 2019 ▪ Approved in US Q2 2019 and in EU Q4 2019 ▪ Data published in *NEJM* 2019; 380:617-628	▪ FPI Q1 2021	▪ FPI Q2 2021
CT Identifier	NCT01772472	NCT04740918	NCT04873362

In collaboration with ImmunoGen, Inc.

ADC=antibody drug conjugate; SABCS=San Antonio Breast Cancer Symposium; RTOR=Real time oncology review; ORR=Objective Response Rate; *NEJM*=New England Journal of Medicine

Perjeta

First-in-class HER2 dimerization inhibitor

Indication	Adjuvant HER2-positive breast cancer	HER2-positive early breast cancer subcutaneous co-formulation	
Phase/study	**Phase III APHINITY**	**Phase III FeDeriCa**	**Phase II PHranceSCa**
# of patients	N=4,803	N=500	N=160
Design	▪ **ARM A:** Perjeta (840mg loading, 420 q3w) plus Herceptin for 52 weeks plus chemotherapy (6-8 cycles) ▪ **ARM B:** Placebo plus Herceptin (52 weeks) plus chemotherapy (6-8 cycles)	Fixed-dose combination (FDC) of Perjeta (P) and Herceptin (H) for subcutaneous administration in combination with chemotherapy in neoadjuvant/adjuvant setting ▪ **ARM A:** P IV+H IV+chemotherapy ▪ **ARM B:** FDC of PH SC+chemotherapy	▪ **ARM A:** PH IV followed by FDC SC ▪ **ARM B:** PH FDC SC followed by IV
Primary endpoint	▪ Invasive disease-free survival (IDFS)	▪ Trough Serum Concentration (Ctrough) of Pertuzumab during cycle 7	▪ Percentage who preferred PH FDC SC
Status	▪ Primary endpoint met Q1 2017 ▪ Data presented at ASCO 2017 and published in *NEJM* 2017; 377:122-131 ▪ Filed in US and EU Q3 2017 ▪ Approved in US Q4 2017 (priority review) and EU Q2 2018 ▪ Six year IDFS data presented at SABCS 2019	▪ Primary endpoint met Q3 2019 ▪ Data presented at SABCS 2019 ▪ Data published in Lancet Oncology 2021 Jan;22(1):85-97 ▪ Filed in US Dec 2019 & in EU Jan 2020; Approved in US Q2 2020 and EU Q4 2020	▪ FPI Q4 2018 ▪ Final analysis completed, 85% patients preferred FDC SC ▪ Data presented at ESMO 2020
CT Identifier	NCT01358877	NCT03493854	NCT03674112

ddAC=dose-dense doxorubicin plus cyclophosphamide; FEC=fluorouracil, epirubicin and cyclophosphamide; ASCO=American Society of Clinical Oncology; *NEJM*=New England Journal of Medcine; SABCS=San Antonio Breast Cancer Symposium; IDMC=Independent Data Monitoring Committee; SC with Halozyme's rHuPH20/ Halozyme's human hyaluronidase

Tecentriq

Anti-PD-L1 cancer immunotherapy – lung cancer

Indication	1L extensive-stage SCLC	2L NSCLC previously treated with an immune checkpoint inhibitor
Phase/study	Phase Ib	Phase III CONTACT-01
# of patients	N=62	N=350
Design	▪ Carboplatin and etoposide +/- Tecentriq followed by maintenance Tecentriq plus Venclexta	▪ **ARM A:** Tecentriq plus cabozantinib ▪ **ARM B:** Docetaxel
Primary endpoint	▪ Safety and efficacy	▪ Overall survival
Status	▪ FPI Q3 2020	▪ FPI Q3 2020
CT Identifier	NCT04422210	NCT04471428

NSCLC=non-small cell lung cancer; NSq=non-squamous; Sq=squamous; SCLC=small cell lung cancer; ESMO=European Society for Medical Oncology; ASCO=American Society of Clinical Oncology; WCLC=World Conference on Lung Cancer

Tecentriq

Anti-PD-L1 cancer immunotherapy – lung cancer

Indication	Adjuvant NSCLC	Neoadjuvant NSCLC
Phase/study	**Phase III** **IMpower010**	**Phase III** **IMpower030**
# of patients	N=1,280	N=450
Design	Following adjuvant cisplatin-based chemotherapy ▪ **ARM A:** Tecentriq ▪ **ARM B:** Best supportive care	▪ **ARM A:** Tecentriq plus platinum-based chemotherapy ▪ **ARM B:** Platinum-based chemotherapy
Primary endpoint	▪ Disease-free survival	▪ Event free survival
Status	▪ Trial amended from PD-L1+ selected patients to all-comers ▪ FPI for all-comer population Q4 2016 ▪ Recruitment completed Q3 2018 ▪ Study met primary endpoint Q1 2021 ▪ Data presented at ASCO, WCLC and ESMO 2021 ▪ Filed in US (priority review) and EU Q2 2021 ▪ Approved in US Oct 2021	▪ FPI Q2 2018 ▪ Recruitment completed Q3 2021
CT Identifier	NCT02486718	NCT03456063

NSCLC=non-small cell lung cancer

Tecentriq

Anti-PD-L1 cancer immunotherapy – lung cancer

Indication	1L NSCLC	Stage IV NSCLC
Phase/study	**Phase II/III** **B-FAST**	**Phase Ib/III** **IMscin001**[1]
# of patients	N=660	N=375
Design	▪ **Cohort A:** ALK+ (Alecensa) ▪ **Cohort B:** RET+ (Alecensa) ▪ **Cohort C:** bTMB-high (Tecentriq) ▪ **Cohort D:** ROS1+ (Rozlytrek) ▪ **Cohort E:** BRAF+ (Zelboraf plus Cotellic plus Tecentriq) ▪ **Cohort F:** EGFR Exon 20+ (Tecentriq, Avastin, carboplatin, pemetrexed)	**Phase Ib** ▪ Dose finding, Tecentriq SC followed by Tecentriq IV **Phase III** ▪ 2L NSCLC non inferiority of Tecentriq SC vs Tecentriq IV
Primary endpoint	▪ Cohort A/B: Objective response rate ▪ Cohort C: Progression-free survival	▪ Observed concentration of Tecentriq in serum at cycle 1
Status	▪ FPI Q3 2017 ▪ Recruitment completed for cohort A Q3 2018 and cohort C Q3 2019 ▪ Cohort A: primary endpoint met Q3 2019; approved in US Q1 2021 ▪ Cohort C: did not show statistical significance for primary endpoint, data presented at ESMO 2021 ▪ Cohort F: FPI Q2 2021	▪ FPI Q4 2018 ▪ FPI in phase III part Q4 2020
CT Identifier	NCT03178552	NCT03735121

[1]SC with Halozyme's rHuPH20/ Halozyme's human hyaluronidase
NSCLC=non-small cell lung cancer; ESMO=European Society for Medical Oncology

Tecentriq

Anti-PD-L1 cancer immunotherapy – SCCHN and melanoma

Indication	Adjuvant squamous cell carcinoma of the head and neck	First-line BRAFv600 mutation-positive metastatic or unresectable locally advanced melanoma
Phase/study	**Phase III** **IMvoke010**	**Phase III** **IMspire150 TRILOGY**[1]
# of patients	N=400	N=500
Design	▪ **ARM A:** Tecentriq 1200mg q3w ▪ **ARM B:** Placebo	Double-blind, randomized, placebo-controlled study ▪ **ARM A:** Tecentriq plus Cotellic plus Zelboraf[2] ▪ **ARM B:** Placebo plus Cotellic plus Zelboraf[2]
Primary endpoint	▪ Event-free survival and overall survival	▪ Progression-free survival
Status	▪ FPI Q1 2018 ▪ Recruitment completed Q1 2020	▪ FPI Q1 2017 ▪ Recruitment completed Q2 2018 ▪ Primary endpoint met Q4 2019 ▪ Data presented at AACR 2020 ▪ Data published in Lancet;395(10240):1835-1844 ▪ Filed in US Q2 2020 under Project Orbis[3] ▪ Approved in US Q3 2020
CT Identifier	NCT03452137	NCT02908672

SCCHN=squamous cell carcinoma of the head and neck; AML=acute myeloid leukemia; [1]In collaboration with Exelixis; [2]Zelboraf in collaboration with Plexxikon, a member of Daiichi Sankyo Group; [3] Project Orbis=FDA framework for concurrent submission and review of oncology products among international partners; AACR=American Association for Cancer Research

Tecentriq

Anti-PD-L1 cancer immunotherapy – UC

Indication	1L metastatic urothelial carcinoma	High-risk non-muscle-invasive bladder cancer	ctDNA+, high-risk muscle-invasive bladder cancer
Phase/study	**Phase III IMvigor130**	**Phase III ALBAN**	**Phase III IMvigor011**
# of patients	N=1,200	N=516	N=495
Design	▪ **ARM A:** Tecentriq plus gemcitabine and carboplatin or cisplatin ▪ **ARM B:** Tecentriq monotherapy ▪ **ARM C:** Placebo plus gemcitabine and carboplatin or cisplatin	▪ **ARM A**: BCG induction and maintenance ▪ **ARM B:** Tecentriq+plus BCG induction and maintenance	▪ **ARM A**: Tecentriq ▪ **ARM B:** Placebo
Primary endpoint	▪ Progression-free survival, overall survival and safety	▪ Recurrence-free survival	▪ Recurrence-free survival
Status	▪ FPI Q3 2016 ▪ FPI for arm B (amended study) Q1 2017 ▪ Recruitment completed Q3 2018 ▪ Study met co-primary endpoint of PFS Q3 2019 ▪ Data presented at ESMO 2019 and AACR 2021	▪ FPI Q4 2018	▪ FPI Q2 2021
CT Identifier	NCT02807636	NCT03799835	NCT04660344

UC=urothelial carcinoma; BCG=Bacille Calmette-Guérin

Tecentriq

Anti-PD-L1 cancer immunotherapy – renal cell cancer

Indication	Adjuvant renal cell carcinoma	Advanced renal cell carcinoma after immune checkpoint inhibitor treatment
Phase/study	**Phase III** **IMmotion010**	**Phase III** **Contact-03**[1]
# of patients	N=778	N=500
Design	▪ **ARM A:** Tecentriq monotherapy ▪ **ARM B:** Placebo	▪ **ARM A:** Tecentriq plus cabozantinib ▪ **ARM B:** Cabozantinib
Primary endpoint	▪ Disease-free survival	▪ Progression-free survival and overall survival
Status	▪ FPI Q1 2017 ▪ Recruitment completed Q1 2019	▪ FPI Q3 2020
CT Identifier	NCT03024996	NCT04338269

[1]In collaboration with Exelixis

Tecentriq

Anti-PD-L1 cancer immunotherapy – HCC

Indication	1L hepatocellular carcinoma	Adjuvant hepatocellular carcinoma
Phase/study	**Phase III** **IMbrave150**	**Phase III** **IMbrave050**
# of patients	N=501	N=662
Design	▪ **ARM A:** Tecentriq plus Avastin ▪ **ARM B:** Sorafenib	▪ **ARM A:** Tecentriq plus Avastin ▪ **ARM B:** Active surveillance
Primary endpoint	▪ Overall survival and progression free survival	▪ Recurrence-Free Survival (RFS)
Status	▪ FPI Q1 2018; recruitment completed Q1 2019 ▪ Data presented at ESMO Asia 2019 ▪ US filing completed under RTOR Q1 2020; filed in EU Q1 2020 ▪ Data published in *NEJM* 2020;382:1894-1905 ▪ Approved in US Q2 2020 and EU Q4 2020	▪ FPI Q4 2019
CT Identifier	NCT03434379	NCT04102098

ESMO=European Society for Medical Oncology; *NEJM*=New England Journal of Medicine; RTOR=Real time oncology review

Tecentriq

Anti-PD-L1 cancer immunotherapy – breast cancer

Indication	Previously untreated metastatic triple negative breast cancer	
Phase/study	**Phase III IMpassion130**	**Phase III IMpassion132**
# of patients	N=900	N=572
Design	▪ **ARM A:** Tecentriq plus nab-paclitaxel ▪ **ARM B:** Placebo plus nab-paclitaxel	▪ **ARM A:** Tecentriq plus capecitabine or carbo/gem ▪ **ARM B:** Placebo plus capecitabine or carbo/gem
Primary endpoint	▪ Progression-free survival and overall survival (co-primary endpoint)	▪ Overall survival
Status	▪ Study met co-primary endpoint of PFS in both PDL1+ and ITT populations Jul 2018 ▪ Primary PFS and interim OS data presented at ESMO 2018 and ASCO 2019 ▪ Data published in *NEJM* 2018; 379:2108-2121 ▪ US accelerated approval Q1 2019 – US indication voluntarily withdrawn Q3 2021 ▪ Approved in EU Q3 2019 ▪ Final OS presented at ESMO Asia 2020	▪ FPI Q1 2018
CT Identifier	NCT02425891	NCT03371017

ESMO=European Society for Medical Oncology; ASCO=American Society of Clinical Oncology; *NEJM*=New England Journal of Medicine

Tecentriq

Anti-PD-L1 cancer immunotherapy – breast cancer

Indication	Neoadjuvant triple negative breast cancer	Adjuvant triple negative breast cancer
Phase/study	**Phase III** **IMpassion031**	**Phase III** **IMpassion030**
# of patients	N=324	N=2,300
Design	▪ **ARM A:** Tecentriq plus nab-paclitaxel ▪ **ARM B:** Placebo plus nab-paclitaxel	▪ **ARM A:** Tecentriq + paclitaxel followed by AC followed by Tecentriq + AC, followed by Tecentriq maintenance ▪ **ARM B:** Placebo + paclitaxel followed by AC followed by placebo
Primary endpoint	▪ Percentage of participants with pathologic complete response (pCR)	▪ Invasive Disease Free Survival
Status	▪ FPI Q3 2017 ▪ Recruitment completed Q2 2018 ▪ Study met primary endpoint Q2 2020 ▪ Data presented at ESMO 2020 ▪ Data published in Lancet 2020;396 (10257):1090-1100 ▪ Filed in EU Q4 2020 - application withdrawn Aug 2021	▪ FPI Q3 2018
CT Identifier	NCT03197935	NCT03498716

ESMO=European Society for Medical Oncology

Venclexta

Novel small molecule Bcl-2 selective inhibitor – CLL

Indication	Untreated CLL patients with coexisting medical conditions	Relapsed or refractory CLL	Untreated fit CLL patients
Phase/study	**Phase III CLL14**	**Phase III MURANO**	**Phase III CristaLLo**
# of patients	N=432	N=391	N=165
Design	▪ **ARM A:** Venclexta plus Gazyva ▪ **ARM B:** Chlorambucil plus Gazyva	▪ **ARM A:** Venclexta plus Rituxan ▪ **ARM B:** Rituxan plus bendamustine	▪ **ARM A:** Venclexta plus Gazyva ▪ **ARM B:** Fludarabine + cyclophosphamide + Rituxan or bendamustine + Rituxan
Primary endpoint	▪ Progression-free survival	▪ Progression-free survival	▪ MRD negativity rate in peripheral blood at 15 months
Status	▪ Study met primary endpoint at pre-specified interim analysis Q4 2018 ▪ BTD granted by FDA Q1 2019 ▪ US filing completed under RTOR Q1 2019 ▪ Filed in EU Q2 2019 ▪ Data presented at ASCO 2019, ASH 2019, ASH 2020 and EHA 2021 ▪ Data published in *NEJM* 2019; 380:2225-2236 ▪ Approved US Q2 2019 and EU Q1 2020	▪ Study met primary endpoint at interim analysis ▪ Data presented at ASH 2017 ▪ Filed in US Q4 2017 and EU Q1 2018 ▪ Data published in *NEJM* 2018; 378:1107–20 ▪ Updated data presented at ASCO 2018, ASH 2019 and ASH 2020 ▪ Approved in US Q2 2018 (priority review) ▪ EU approval Q4 2018	▪ FPI Q2 2020
CT Identifier	NCT02242942	NCT02005471	NCT04285567

Joint project with AbbVie, in collaboration with The Walter and Eliza Hall Institute

CLL=chronic lymphocytic leukemia; ASH=American Society of Hematology; ASCO=American Society of Clinical Oncology; RTOR=Real time oncology review; *NEJM*=New England Journal of Medicine; MRD=Minimal Residual Disease

Venclexta

Novel small molecule Bcl-2 selective inhibitor – MM

Indication	Relapsed or refractory multiple myeloma		
Phase/study	**Phase I**	**Phase Ib/II**	**Phase III CANOVA**
# of patients	N=166	N=120	N=244
Design	▪ **Dose escalation cohort:** Venclexta dose escalation ▪ **Safety expansion cohort (t11;14):** Venclexta expansion ▪ **Combination:** Venclexta plus dexamethasone	▪ Venclexta plus carfilzomib plus dexamethasone in t(11;14) positive r/r MM	▪ Venclexta plus dexamethazone vs pomalidomide plus dexamethasone in t(11;14) positive r/r MM
Primary endpoint	▪ Safety and maximum tolerated dose	▪ Safety, objective response rate, PK, PD	▪ Progression-free survival
Status	▪ FPI Q4 2012 ▪ Data presented at ASCO 2015 ▪ Updated data presented at ASCO 2016 and ASH 2016 ▪ Data published in Blood 2017; 130(22):2401-2409	▪ FPI Q1 2017 ▪ Data published Blood Adv 2021 Sep 1; doi:10.1182/bloodadvances.2020004146	▪ FPI Q4 2018
CT Identifier	NCT01794520	NCT02899052	NCT03539744

Joint project with AbbVie, in collaboration with The Walter and Eliza Hall Institute;
MM=multiple myeloma; ASCO=American Society of Clinical Oncology; ASH=American Society of Hematology

Venclexta

Novel small molecule Bcl-2 selective inhibitor – AML

Indication	Relapsed or refractory AML	Relapsed or refractory hematological malignancies
Phase/study	**Phase I**	**Phase I**
# of patients	N=52	N=86
Design	▪ Venclexta in combination with gilteritinib	▪ Venclexta plus AMG176 dose escalation ▪ Dose expansion phase to confirm safety and preliminary RPTD
Primary endpoint	▪ Dose and composite complete remission (CRc) Rate	▪ Maximum tolerated dose and safety
Status	▪ FPI Q4 2018 ▪ Initial data presented at ASH 2019 ▪ Updated data presented at ASH 2020	▪ FPI Q2 2019 ▪ Study on clinical hold
CT Identifier	NCT03625505	NCT03797261

Joint project with AbbVie, in collaboration with The Walter and Eliza Hall Institute;
AML=acute myeloid leukemia; ASH=American Society of Hematology; RPTD =recommended phase II dose

Venclexta

Novel small molecule Bcl-2 selective inhibitor – MDS

Indication	Relapsed or refractory myelodysplastic syndromes	Treatment-naive myelodysplastic syndromes	Newly diagnosed higher-risk myelodysplatic syndrome
Phase/study	**Phase Ib**	**Phase Ib**	**Phase III VERONA**
# of patients	N=70	N=137	N=500
Design	Cohort 1: ▪ **ARM A:** Venclexta 400 mg ▪ **ARM B:** Venclexta 800 mg Cohort 2: ▪ **ARM A:** Venclexta plus azacitidine Study expansion: ▪ Venclexta or Venclexta plus azacitidine	▪ **Dose escalation cohort:** Venclexta plus azacitidine dose escalation ▪ **Safety expansion cohort**	▪ **ARM A:** Venclexta plus azacitidine ▪ **ARM B:** Placebo plus azacitidine
Primary endpoint	▪ Safety, efficacy, PK and PD	▪ Safety, PK, recommended phase II dose (RP2D)	▪ Complete remission rate and overall survival
Status	▪ FPI Q1 2017	▪ FPI Q1 2017 ▪ Data presented at ASH 2019 ▪ Updated data presented at ASH 2020 ▪ BTD granted by FDA July 2021	▪ FPI Q4 2020
CT Identifier	NCT02966782	NCT02942290	NCT04401748

Joint project with AbbVie, in collaboration with The Walter and Eliza Hall Institute
MDS=myelodysplastic syndromes; ASH=American Society of Hematology

Polivy (polatuzumab vedotin)

ADC targeting CD79b to treat B cell malignancies

Indication	Relapsed or refractory FL and DLBCL	1L DLBCL
Phase/study	**Phase Ib/II**	**Phase III POLARIX**
# of patients	N=329	N=875
Design	▪ **PIb:** Dose escalation ▪ **PhII:** Polatuzumab vedotin plus BR vs. BR ▪ **PhII expansion:** Polatuzumab vedotin plus Gazyva (non-randomized)	▪ **ARM A:** Polatuzumab vedotin plus R-CHP ▪ **ARM B:** R-CHOP
Primary endpoint	▪ Safety and response by PET/CT	▪ Progression-free survival
Status	▪ FPI Q4 2014 ▪ PRIME Designation (Q2 2017) and Breakthrough Therapy Designation (Q3 2017) granted for r/r DLBCL ▪ Pivotal randomized Ph2 in r/r DLBCL presented at ASH 2017 and ASH 2020 ▪ Filed in US and EU Q4 2018; US priority review granted Q1 2019 ▪ Approved in US Q2 2019 and in EU Jan 2020 ▪ Published in J Clin Oncol. 2020 Jan 10;38(2):155-165	▪ FPI Q4 2017 ▪ Recruitment completed Q2 2019 ▪ Study met primary endpoint Q3 2021
CT Identifier	NCT02257567	NCT03274492

In collaboration with Seagen Inc.

ADC=antibody–drug conjugate; DLBCL=diffuse large B cell lymphoma; FL=follicular lymphoma; r/r=relapsed or refractory; ASH=American Society of Hematology; BR=bendamustine and Rituxan; R-CHP=Rituxan, cyclophosphamide, hydroxydoxorubicin, prednisone; R-CHOP=Rituxan, cyclophosphamide, doxorubicin, vincristine, and prednisone

Rozlytrek (entrectinib)

CNS-active and selective inhibitor of NTRK/ROS1

Indication	Locally Advanced or Metastatic tumors with ROS1 gene rearrangement	Locally Advanced or Metastatic tumors with NTRK1/2/3 gene rearrangement	Pediatric tumors with NTRK 1/2/3, ROS-1 or ALK rearrangement
Phase/study	**Phase II STARTRK2**	**Phase II STARTRK2**	**Phase I/Ib STARTRK - NG**
# of patients	N~300 total	N~300 total	N~80
Design	Single arm with Baskets based on tumor type and genomic alteration status	Single arm with Baskets based on tumor type and genomic alteration status	Single arm with Baskets based on tumor type and genomic alteration status
Primary endpoint	▪ Objective response rate	▪ Objective response rate	▪ Maximum tolerated dose (MTD) and recommended phase II dose (RP2D)
Status	▪ FPI Q1 2016 ▪ Data presented at WCLC 2018	▪ FPI Q1 2016 ▪ Data presented at ESMO 2018	▪ FPI Q2 2016 ▪ Initial data presented at ASCO 2019
	▪ Breakthrough Therapy Designation granted by FDA (Q2 2017), PRIME designation granted by EMA (Q1 2018) and Sakigake Designation granted by MHLW (Q4 2017) for NTRK fusion-positive, locally advanced or metastatic solid tumors ▪ Filed in US Q4 2018 and EU Q1 2019 ▪ Approved in US Q3 2019 and EU Q3 2020 ▪ Published in Lancet Oncol. 2020 Feb;21(2):261-271 and 271-282		
CT Identifier	NCT02568267	NCT02568267	NCT02650401

WCLC=World Conference on Lung Cancer; ESMO=European Society for Medical Oncology; ASCO=American Society of Clinical Oncology; NTRK=neurotrophic receptor tyrosine kinase; PRIME= priority medicines

Gavreto (pralsetinib, RG6396)

Highly selective RET inhibitor

Indication	RET+ NSCLC, thyroid cancer and other advanced solid tumors	1L RET fusion-positive, metastatic NSCLC
Phase/study	**Phase I/II ARROW**	**Phase III AcceleRET Lung**
# of patients	N=647	N=250
Design	▪ **Part 1:** Gavreto 30-600mg dose-escalation ▪ **Part 2:** Gavreto 400mg dose expansion	▪ **Arm A:** Gavreto 400mg ▪ **Arm B:** Platinum-based chemotherapy +/- pembrolizumab
Primary endpoint	▪ Safety and efficacy	▪ Progression-free survival
Status	▪ Data presented at ASCO (NSCLC) and ESMO (medullary thyroid cancer (MTC)) 2020 ▪ Filed in US and EU for RET fusion-positive NSCLC and US for RET-mutant MTC and RET fusion-positive thyroid cancer ▪ Approved in US Q3 2020 in RET fusion-positive NSCLC, in Q4 2020 in RET-mutant MTC and RET fusion-positive thyroid cancer ▪ Updated data presented at ASCO 2021 ▪ Data published in Lancet Oncol 2021 Jul;22(7):959-969 ▪ CHMP (EU) positive opinion for RET fusion-positive NSCLC Q3 2021	▪ Study initiated in Q1 2020
CT Identifier	NCT03037385	NCT04222972

In collaboration with Blueprint Medicines

NSCLC=non-small cell lung cancer; MTC=medullary thyroid cancer; ASCO=American Society of Clinical Oncology; ESMO=European Society for Medical Oncology

Ocrevus (ocrelizumab, RG1594)

Humanized mAb selectively targeting CD20+ B cells

Indication	Relapsing multiple sclerosis (RMS)		Primary-progressive multiple sclerosis (PPMS)
Phase/study	**Phase III OPERA I**	**Phase III OPERA II**	**Phase III ORATORIO**
# of patients	N=821	N=835	N=732
Design	96-week treatment period: ▪ **ARM A:** Ocrelizumab 2x300 mg iv followed by 600 mg iv every 24 weeks ▪ **ARM B:** Interferon β-1a	96-week treatment period: ▪ **ARM A:** Ocrelizumab 2x300 mg iv followed by 600 mg iv every 24 weeks ▪ **ARM B:** Interferon β-1a	120-week treatment period: ▪ **ARM A:** Ocrelizumab 2x300 mg iv every 24 weeks ▪ **ARM B:** Placebo
Primary endpoint	▪ Annualized relapse rate at 96 weeks versus Rebif	▪ Annualized relapse rate at 96 weeks versus Rebif	▪ Sustained disability progression versus placebo by Expanded Disability Status Scale (EDSS)
Status	▪ Primary endpoint met Q2 2015, OLE ongoing ▪ Primary data presented at ECTRIMS 2015 ▪ Updated data presented at AAN and ECTRIMS 2017, AAN and EAN 2018 ▪ Data published in *NEJM* 2017; 376:221-234 ▪ Data published on COVID-19 in Mult Scler Relat Disord on Ocrevus treated people with MS, doi.org/10.1016/j.msard.2020.102725		▪ Primary endpoint met Q3 2015 ▪ Primary data presented at ECTRIMS 2015, updated data presented at AAN and ECTRIMS 2017, AAN and EAN 2018 ▪ Data published in *NEJM* 2017; 376:209-220
	▪ Approved in US Q1 2017 and EU Q1 2018		
CT Identifier	NCT01247324	NCT01412333	NCT01194570

OLE=Open label extension; ECTRIMS=European Committee for Treatment and Research in Multiple Sclerosis; AAN=Annual Meeting of the American Academy of Neurology; EAN=European Academy of Neurology; *NEJM*=New England Journal of Medicine

Ocrevus (ocrelizumab, RG1594)

Humanized mAb selectively targeting CD20+ B cells

Indication	Relapsing and primary progressive multiple sclerosis (RMS & PPMS)	Primary progressive multiple sclerosis (PPMS)
Phase/study	**Phase IIIb ENSEMBLE PLUS**	**Phase IIIb ORATORIO-HAND**
# of patients	N=1225	N ~ 1000
Design	▪ Substudy of ongoing phase IIIb, open-label, single-arm ENSEMBLE study ▪ Shorter two-hour infusion time	120-week treatment period: ▪ **ARM A:** Ocrelizumab 600mg IV every 24 weeks ▪ **ARM B:** Placebo
Primary endpoint	▪ Safety, measured by the proportion of patients with IRRs following the first randomised 600 mg infusion (frequency/severity assessed during and 24-hours post infusion)	▪ Time to upper limb disability progression confirmed for at least 12 weeks
Status	▪ Filed in US and EU Q1 2020 ▪ Approved in EU Q2 2020 and US Q4 2020 ▪ Data published Neurol, Neuroimmunol and Neuroinflamm Sept 2020; 7(5), e807	▪ FPI Q3 2019
CT Identifier	NCT03085810	NCT04035005

Ocrevus (ocrelizumab, RG1594)

Humanized mAb selectively targeting CD20+ B cells

Indication	Primary progressive multiple sclerosis (PPMS)	Relapsing multiple sclerosis (RMS)
Phase/study	**Phase IIIb GAVOTTE**	**Phase IIIb MUSETTE**
# of patients	N ~ 699	N ~ 786
Design	120-week treatment period: ▪ **ARM A:** Ocrelizumab 600mg IV every 24 weeks ▪ **ARM B:** Ocrelizumab 1200mg if body weight <75kg or 1800mg if body weight > or equal to 75kg every 24 weeks	120-week treatment period: ▪ **ARM A:** Ocrelizumab 600mg IV every 24 weeks ▪ **ARM B:** Ocrelizumab 1200mg if body weight <75kg or 1800mg if body weight > or equal to 75kg every 24 weeks
Primary endpoint	▪ Superiority of Ocrelizumab higher dose versus approved dose on composite confirmed disability progression (cCDP)	▪ Superiority of Ocrelizumab higher dose versus approved dose on composite confirmed disability progression (cCDP)
Status	▪ FPI Q4 2020	▪ FPI Q4 2020
CT Identifier	NCT04548999	NCT04544436

Evrysdi (risdiplam, RG7916)

Oral SMN2 splicing modifier

Indication	Spinal muscular atrophy		
Phase/study	**Phase II/III FIREFISH**	**Phase II/III SUNFISH**	**Phase II JEWELFISH**
# of patients	N=21 (Part 1), 41 (Part 2)	N=51 (Part 1), 180 (Part 2)	N=174
Design	Open-label study in infants with type 1 spinal muscular atrophy: ▪ **Part 1 (dose-finding):** At least 4 weeks ▪ **Part 2 (confirmatory):** 24 months	Randomized, double-blind, placebo-controlled study in adult and pediatric patients with type 2 or type 3 spinal muscular atrophy: ▪ **Part 1 (dose-finding):** At least 12 weeks ▪ **Part 2 (confirmatory):** 24 months	▪ Open-label single arm study in adult and pediatric patients with previously treated SMA type 1, 2 and 3
Primary endpoint	▪ Safety, tolerability, PK, PD and efficacy	▪ Safety, tolerability, PK, PD and efficacy	▪ Safety, tolerability and PK/PD
Status	▪ 12 month data from Part 1 presented at AAN, CureSMA and EAN 2019; 16 month data presented at WMS 2019 ▪ Study met primary endpoint in part 2 Jan 2020 ▪ Part 2 1-year data presented at AAN 2020, part 1 2-year data at WMS 2020 ▪ Part 1 data published in *NEJM* 2021;384:915-923 ▪ Part 2 2-year data presented at AAN 2021 ▪ Part 2 1-year data published in NEJM 2021;385:427-435	▪ Recruitment completed for part 2 Q3 2018 ▪ 12 month data from Part 1 presented at AAN, CureSMA and EAN 2019; 16 month data presented at WMS 2019 ▪ Study met primary endpoint in part 2 Q4 2019 ▪ Part 2 1-year data presented at SMA Europe 2020 and 2-year data at MDA 2021	▪ FPI Q1 2017 ▪ Data presented at WMS 2017, AAN 2018, WMS 2018, CureSMA 2019, WMS 2019, CureSMA 2020 and 2021 ▪ Recruitment completed Q1 2020
	▪ Orphan drug designation granted by FDA Q1 2017 and EU Q1 2019, PRIME designation in Q4 2018 ▪ Approved in US Q3 2020 and EU Q1 2021		
CT Identifier	NCT02913482	NCT02908685	NCT03032172

In collaboration with PTC Therapeutics and SMA Foundation

SMN=survival motor neuron; AAN=American Academy of Neurology; WMS=World Muscle Society; EAN=European Academy of Neurology; *NEJM*=New England Journal of Medicine; PRIME=priority medicines

Evrysdi (risdiplam, RG7916)

Oral SMN2 splicing modifier

Indication	Spinal muscular atrophy
Phase/study	**Phase II** **RAINBOWFISH**
# of patients	N=25
Design	Open-label, single-arm, multicenter study in infants aged from birth to 6 weeks who have been genetically diagnosed with SMA but are not yet presenting with symptoms
Primary endpoint	▪ Proportion of participants with two copies of the SMN2 gene (excluding the known SMN2 gene modifier mutation c.859G>C) and baseline CMAP>=1.5 millivolt who are sitting without support
Status	▪ FPI Q3 2019 ▪ Initial data presented at CureSMA and WMS 2021
CT Identifier	NCT03779334

In collaboration with PTC Therapeutics and SMA Foundation
SMN=survival motor neuron; CMAP=compound muscle action potential

Enspryng (satralizumab, RG6168, SA237)

Anti-IL-6 receptor humanized monoclonal antibody

Indication	Neuromyelitis optica spectrum disorder (NMOSD)	
Phase/study	**Phase III** **SAkuraStar**	**Phase III** **SAkuraSky**
# of patients	N=95	N=70 (adults); N=6 (adolescents)
Design	Satralizumab as monotherapy: ▪ **Group A:** Satralizumab 120mg SC monthly ▪ **Group B:** Placebo SC monthly	Add-on therapy of satralizumab: ▪ **Group A:** Satralizumab 120mg SC monthly ▪ **Group B:** Placebo SC Both arms on top of baseline therapies: azathioprine, mycophenolate mofetil or oral corticosteroids
Primary endpoint	▪Efficacy (time to first relapse) and safety, PD, PK	▪ Efficacy (time to first relapse) and safety, PD, PK
Status	▪ Primary endpoint met Q4 2018 ▪ Data presented at ECTRIMS 2019 ▪ Published in Lancet Neurology 2020; 19(5): 402-412	▪ FPI Q3 2017 ▪ Primary endpoint met Q3 2018 ▪ Data presented at ECTRIMS 2018 and AAN 2019 ▪ Published in *NEJM* 2019; 381:2114-2124
	▪ BTD granted by FDA Q4 2018 ▪ Filed in EU Q3 2019; US acceptance of filing Q4 2019, ▪ Approved in US Q3 2020 and EU Q2 2021	
CT Identifier	NCT02073279	NCT02028884

*Trials managed by Chugai (Roche opted-in)

ECTRIMS=European Committee for Treatment and Research in Multiple Sclerosis; AAN=American Academy of Neurology; *NEJM*=New England Journal of Medicine

Enspryng (satralizumab, RG6168, SA237)

Anti-IL-6 receptor humanized monoclonal antibody

Indication	Generalised Myasthenia Gravis
Phase/study	**Phase III** **Luminesce**
# of patients	N=240
Design	▪ **Group A:** Satralizumab plus SoC ▪ **Group B:** Placebo plus SoC
Primary endpoint	▪ Mean change from baseline in total MG-ADL score at week 24 in AChR+ population
Status	▪ FPI Oct 2021
CT Identifier	NCT04963270

MG-ADL= Myasthenia Gravis Activities of Daily Living; SoC=Standard of Care; AChR=Acetylcholine receptor

Gazyva (obinutuzumab)

Immunology development program

Indication	Lupus nephritis		Membranous nephropathy
Phase/study	**Phase II NOBILITY**	**Phase III REGENCY**	**Phase III MAJESTY**
# of patients	N=126	N=252	N=140
Design	▪ **ARM A:** Obinutuzumab 1000mg IV plus mycophenolate mofetil / mycophenolic acid ▪ **ARM B:** Placebo IV plus mycophenolate mofetil / mycophenolic acid	▪ **ARM A:** Obinutuzumab 1000 mg IV (six doses through Week 52) plus mycophenolate mofetil ▪ **ARM B:** Obinutuzumab 1000 mg IV (five doses through Week 52) plus mycophenolate mofetil ▪ **ARM C:** Placebo IV plus mycophenolate mofetil	▪ **ARM A:** Obinutuzumab 1000 mg IV dosed at baseline and weeks 0, 2, 24, and 26 on top of renin-angiotensin inhibitors ▪ **ARM B:** Tacrolimus treatment for 12 months
Primary endpoint	▪ Percentage of participants who achieve complete renal response (CRR)	▪ Percentage of participants who achieve complete renal response (CRR)	▪ Percentage of patients who achieve complete remission at week 104
Status	▪ Recruitment completed Q4 2017 ▪ Primary endpoint met Q2 2019 ▪ Breakthrough therapy designation granted by the FDA Q3 2019 ▪ Data presented at ASN and ACR 2019	▪ FPI Q3 2020	▪ FPI Q2 2021
CT Identifier	NCT02550652	NCT04221477	NCT04629248

In collaboration with Biogen
ASN=American Society of Nephrology; ACR=American College of Rheumatology

Actemra/RoActemra (RG-1569)

Interleukin 6 receptor inhibitor

Indication	Adult hospitalised with severe COVID-19 pneumonia	
Phase/study	**Phase III COVACTA[1]**	**Phase III REMDACTA[2]**
# of patients	N=450	N=650
Design	▪ **Arm A:** tocilizumab plus standard of care ▪ **Arm B:** placebo plus standard of care	▪ **Arm A:** remdesivir plus tocilizumab ▪ **Arm B:** remdesivir plus placebo
Primary endpoint	▪ Clinical status assessed using 7-Category Ordinal Scale (Day 28) ▪ Primary endpoint not met Q3 2020	▪ Time to hospital discharge or ready for discharge
Status	▪ FPI Q1 2020 ▪ Recruitment completed Q2 2020 ▪ Published in NEJM 2021 Feb 25;doi: 10.1056/NEJMoa2028700	▪ FPI Q2 2020 ▪ Recruitment completed Jan 2021 ▪ Study did not meet primary endpoint Q1 2021
	▪ Filed in the EU Q3 2021	
CT Identifier	NCT04320615	NCT04409262

[1]In collaboration with US Biomedical Advanced Research and Development Authority (BARDA); [2]In collaboration with Gilead Sciences, Inc.

Actemra/RoActemra (RG-1569)

Interleukin 6 receptor inhibitor

Indication	Adult hospitalised with severe COVID-19 pneumonia	
Phase/study	**Phase II** **MARIPOSA**	**Phase III** **EMPACTA**
# of patients	N=100	N=379
Design	▪ **Arm A:** 8 mg/kg tocilizumab plus standard of care ▪ **Arm B:** 4mg/kg tocilizumab plus standard of care	Conducted in sites known to provide critical care to underserved and minority populations that often do not have access to clinical trials ▪ **Arm A:** tocilizumab plus standard of care ▪ **Arm B:** placebo plus standard of care
Primary endpoint	▪ Pharmacodynamics and pharmacokinetics	▪ Cumulative proportion of participants requiring mechanical ventilation by day 28
Status	▪ FPI Q2 2020 ▪ Recruitment completed Q2 2020	▪ FPI Q2 2020 ▪ Primary endpoint met Q3 2020 ▪ Published in *NEJM* 2021 Jan 7;384(1):20-30
	▪ Filed in the EU Q3 2021	
CT Identifier	NCT04363736	NCT04372186

NEJM=New England Journal of Medicine

Xolair

Humanized mAb that selectively binds to IgE

Indication	Food allergy
Phase/study	**Phase III** **OUtMATCH[1]**
# of patients	N=225
Design	▪ Xolair by subcutaneous injection either every 2 weeks or every 4 weeks for 16 to 20 weeks
Primary endpoint	▪ Number of participants who successfully consume ≥600 mg of peanut protein without dose-limiting symptoms
Status	▪ FPI July 2019
CT Identifier	NCT03881696

In collaboration with Novartis; [1] Sponsor of the study is the National Institute of Allergy and Infectious Diseases (NIAID)

Xofluza (baloxavir marboxil, RG6152, S-033188)

Small molecule, novel CAP-dependent endonuclease inhibitor

Indication	Influenza		
Phase/study	**Phase III** **miniSTONE 1 (0-1 year old)**	**Phase III** **miniSTONE 2 (1-12 years old)**	**Phase IIIb** **CENTERSTONE**
# of patients	N=30	N=176	N=3,160
Design	▪ Xofluza on Day 1 (based on body weight and age) in healthy pediatric patients from birth to <1 year with influenza-like symptoms	▪ Xofluza vs Tamiflu in healthy pediatric patients 1 to <12 years of age with influenza-like symptoms	▪ Reduction of direct transmission of influenza from otherwise healthy patients to household contacts ▪ Patients treated with Xofluza vs placebo
Primary endpoint	▪ Safety	▪ Safety	▪ Percentage of household contacts who are PCR-positive for influenza by day 5 post randomization of index patients
Status	▪ FPI Q1 2019	▪ Primary endpoint met Q2 2019 ▪ Data presented at OPTIONS X 2019 ▪ Filed in US Q1 2020 ▪ Data published in Pediatric Infectious Disease 2020 Aug;39(8):700-705 ▪ Not approved in the US, determining path forward with the FDA	▪ FPI Q4 2019
CT Identifier	NCT03653364	NCT03629184	NCT03969212

In collaboration with Shionogi & Co., Ltd.

Pipeline summary

Marketed products additional indications

Global Development late-stage trials

pRED (Roche Pharma Research & Early Development)

gRED (Genentech Research & Early Development)

Spark

Roche Group YTD Sep 2021 sales

Diagnostics

Foreign exchange rate information

Ipatasertib (RG7440, GDC-0068)

Highly selective small molecule inhibitor of Akt

Indication	1L castration-resistant prostate cancer	Advanced prostate cancer and solid tumors	Prostate cancer previously treated with androgen receptor-targeted therapy
Phase/study	**Phase III IPATential150**	**Phase Ib**	**Phase Ib**
# of patients	N=1,100	N=54	N=50
Design	▪ **ARM A:** Ipatasertib plus abiraterone ▪ **ARM B:** Placebo plus abiraterone	▪ Ipatasertib plus rucaparib **Stage 1**: Dose escalation in advanced breast, ovarian and prostate cancer ▪ **Stage 2:** Dose expansion in prostate cancer	▪ Ipatasertib plus Tecentriq plus docetaxel
Primary endpoint	▪ Radiographic progression-free survival (rPFS) in patients with PTEN loss tumors and overall population	▪ Safety and efficacy	▪ Safety and efficacy
Status	▪ FPI Q2 2017 ▪ Recruitment completed Jan 2019 ▪ Study met co-primary endpoint in rPFS in patients with PTEN loss tumors Q2 2020 ▪ Data presented at ESMO 2020 ▪ Published in Lancet 2021; 398:131-142	▪ FPI Q2 2019	▪ FPI Q3 2020
CT Identifier	NCT03072238	NCT03840200	NCT04404140

In collaboration with Array BioPharma
ESMO=European Society for Medical Oncology

Tiragolumab (anti-TIGIT, RG6058, MTIG7192A)

Monoclonal antibody targeting the immune checkpoint inhibitor TIGIT

Indication	1L NSCLC PD-L1 TPS>50%	1L ES-SCLC	Stage III unresectable 1L NSCLC
Phase/study	**Phase III SKYSCRAPER-01**	**Phase III SKYSCRAPER-02**	**Phase III SKYSCRAPER-03**
# of patients	N=500-560	N=470	N=800
Design	▪ **Arm A:** Tiragolumab plus Tecentriq ▪ **Arm B:** Placebo plus Tecentriq	▪ **Arm A:** Tiragolumab plus Tecentriq, carboplatin and etoposide ▪ **Arm B:** Placebo plus Tecentriq, carboplatin and etoposide	▪ **Arm A:** Tiragolumab plus Tecentriq for up to 12 months ▪ **Arm B:** Durvalumab for up to 12 months
Primary endpoint	▪ Overall survival and progression free survival	▪ Overall survival and progression free survival	▪ Progression-free survival
Status	▪ FPI Q1 2020 ▪ Recruitment completed Q3 2021	▪ FPI Q1 2020 ▪ Recruitment completed Q1 2021	▪ FPI Q3 2020
CT Identifier	NCT04294810	NCT04256421	NCT04513925

NSCLC=Non-small cell lung cancer; ES-SCLC=Extensive stage small cell lung cancer

Tiragolumab (anti-TIGIT, RG6058, MTIG7192A)

Monoclonal antibody targeting the immune checkpoint inhibitor TIGIT

Indication	Metastatic and/or recurrent PD-L1+ cervical cancer	Neoadjuvant and adjuvant NSCLC	1L non-squamous NSCLC
Phase/study	**Phase II SKYSCRAPER-04**	**Phase II SKYSCRAPER-05**	**Phase II SKYSCRAPER-06**
# of patients	N=172	N=82	N=200
Design	▪ **Arm A:** Tiragolumab plus Tecentriq ▪ **Arm B:** Tecentriq	▪ **Arm A:** (PD-L1 high) neoadjuvant tiragolumab plus Tecentriq followed by adjuvant tiragolumab plus Tecentriq or adjuvant chemo ▪ **Arm B:** (PD-L1 all-comers) neoadjuvant tiragolumab plus Tecentriq plus chemo followed by adjuvant tiragolumab plus Tecentriq	▪ **Arm A:** Tiragolumab plus Tecentriq plus pemetrexed plus chemo followed by maintenance tiragolumab plus Tecentriq plus pemetrexed ▪ **Arm B:** Placebo plus pembrolizumab plus pemetrexed plus chemo followed by maintenance placebo plus pembrolizumab plus pemetrexed
Primary endpoint	▪ Objective Response Rate (ORR)	▪ Pathologic complete response, major pathological response and safety	▪ Objective response rate (ORR) and progression-free survival
Status	▪ FPI Q2 2020	▪ FPI Q2 2021	▪ FPI Q4 2020
CT Identifier	NCT04300647	NCT04832854	NCT04619797

NSCLC=Non-small cell lung cancer

Tiragolumab (anti-TIGIT, RG6058, MTIG7192A)

Monoclonal antibody targeting the immune checkpoint inhibitor TIGIT

Indication	Locally advanced esophageal cancer	1L esophageal cancer	1L recurrent/metastatic PD-L1 positive squamous cell head and neck carcinoma
Phase/study	**Phase III SKYSCRAPER-07**	**Phase III SKYSCRAPER-08**	**Phase II SKYSCRAPER-09**
# of patients	N=750	N=500	N=120
Design	▪ **Arm A:** Tiragolumab plus Tecentriq ▪ **Arm B:** Tecentriq plus placebo ▪ **Arm C:** Placebo plus placebo	▪ **Arm A:** Tiragolumab plus Tecentriq plus cisplatin and paclitaxel ▪ **Arm B:** Placebo plus placebo plus cisplatin and paclitaxel	▪ **Arm A:** Tiragolumab plus Tecentriq ▪ **Arm B:** Tecentriq plus placebo
Primary endpoint	▪ Progression-free survival (A vs C) ▪ Overall survival (A vs C, hierarchical, B vs C hierarchical)	▪ Overall survival and progression-free survival	▪ Objective response rate (ORR)
Status	▪ FPI Q3 2020	▪ FPI Q4 2020	▪ FPI Q1 2021
CT Identifier	NCT04543617	NCT04540211	NCT04665843

NSCLC=Non-small cell lung cancer

Tiragolumab (anti-TIGIT, RG6058, MTIG7192A)

Monoclonal antibody targeting the immune checkpoint inhibitor TIGIT

Indication	Solid tumors	NSCLC	R/R Multiple Myeloma (MM) or R/R B-cell NHL
Phase/study	**Phase I**	**Phase II CITYSCAPE**	**Phase I**
# of patients	N=540	N=135	N=52
Design	▪ **Phase Ia:** Dose escalation and expansion of tiragolumab ▪ **Phase Ib:** Dose escalation and expansion of tiragolumab in combination with Tecentriq and/or other anti-cancer therapies	▪ **Arm A:** Tecentriq plus tiragolumab ▪ **Arm B:** Tecentriq monotherapy	▪ Phase Ia: Tiragolumab monotherapy ▪ Phase Ib: Tiragolumab plus daratumumab (r/r MM) or rituximab (r/r NHL)
Primary endpoint	▪ Safety, tolerability, PK variability and preliminary efficacy	▪ Overall response rate and progression-free survival	▪ Safety, tolerability, PK/PD and preliminary efficacy
Status	▪ FPI Q2 2016 ▪ Data presented at AACR 2020	▪ FPI Q3 2018 ▪ Recruitment completed Q2 2019 ▪ Data presented at ASCO 2020 and WCLC 2021 ▪ Breakthrough therapy designation granted by FDA Dec 2020	▪ FPI Q2 2019
CT Identifier	NCT02794571	NCT03563716	NCT04045028

NSCLC=Non-small cell lung cancer; r/r=Relapsed refractory; NHL=Non-Hodgkin's lymphoma; ASCO=American Society of Clinical Oncology; AACR=American Association for Cancer Research

Glofitamab (CD20-TCB, RG6026)

Bispecific anti-CD20/CD3 antibody engaging T and B cells simultaneously

Indication	Relapsed or refractory Non-Hodgkin's lymphoma		
Phase/study	**Phase I**	**Phase Ib**	**Phase I**
# of patients	N=700	N=140	N=18-36
Design	**Cohort 1:** Single-agent dose escalation study ▪ Initial dose escalation ▪ Expansion cohort in r/r DLBCL ▪ Expansion cohort in r/r FL All patients will receive pretreatment with a single dose of Gazyva (1000mg) **Cohort 2:** glofitamab plus Gazyva (i.e. continuous treatment with Gazyva)	Dose escalation and expansion ▪ **Arm A:** glofitamab plus Tecentriq ▪ **Arm B:** glofitamab plus Polivy	Glofitamab SC ▪ Part 1 dose escalation
Primary endpoint	▪ Efficacy, safety, tolerability and pharmacokinetics	▪ Safety	▪ Safety
Status	▪ FPI Q1 2017 ▪ Data presented at ASH 2018, ICML and ASH 2019; EHA and ASH 2020; ASCO, EHA and ICML 2021 ▪ Data published online 19 March 2021 J Clin Oncology 39:18:1959-1970	▪ Arm A: FPI Q2 2018 ▪ Data presented at ASH 2019 ▪ Arm B: FPI Q4 2020	▪ FPI Q3 2021
CT Identifier	NCT03075696	NCT03533283	ISRCTN17975931

DLBCL=diffuse large B cell lymphoma; FL=Follicular lymphoma; ASH=American Society of Hematology; EHA=European Hematology Association; ICML=International Conference on Malignant Lymphoma; SC=subcutenous

Glofitamab (CD20-TCB, RG6026)

Bispecific anti-CD20/CD3 antibody engaging T and B cells simultaneously

Indication	Non-Hodgkin's lymphoma	Relapsed/refractory DLBCL and High-Grade Large B-Cell Lymphoma	2L+ SCT-ineligible DLBCL
Phase/study	**Phase Ib**	**Phase Ib**	**Phase III STARGLO**
# of patients	Part I: 15-60 Part II: ~66-104	N=20	N=270
Design	▪ **Part I:** Dose-finding for the combination of glofitamab plus G/R CHOP in r/r indolent NHL ▪ **Part II:** Dose expansion glofitamab plus G/R-CHOP or R-CHOP in 1L DLBCL ▪ **Part III:** glofitamab plus R-CHP plus Pola	▪ Glofitamab plus gemcitabine and oxaliplatin, followed by up to 4 cycles of glofitamab monotherapy ▪ A single dose of obinutuzumab will be administered 7 days prior to the first dose of glofitamab	▪ **Arm A:** glofitamab plus gemcitabine and oxaliplatin, followed by up to 4 cycles of glofitamab monotherapy ▪ **Arm B:** Rituxan in combination with gemcitabine and oxaliplatin A single dose of obinutuzumab will be administered 7 days prior to the first dose of glofitamab
Primary endpoint	▪ Safety	▪ Safety	▪ Overall survival
Status	▪ Part I: FPI Q1 2018 ▪ Part II: FPI Q1 2021	▪ FPI Q2 2020	▪ FPI Q1 2021
CT Identifier	NCT03467373	NCT04313608	NCT04408638

DLBCL=diffuse large B cell lymphoma; SCT=stem cell transplant; CHOP=cyclophosphamide, doxorubicin, vincristine and prednisone; R=Rituxan/MabThera; G=Gazyva

Mosunetuzumab (CD20/CD3, RG7828)

Bispecific anti-CD20/CD3 antibody engaging T and B cells simultaneously

Indication	3L+ FL, 3L+ DLBCL & other R/R NHL	1L DLBCL	R/R DLBCL
Phase/study	**Phase I/II**	**Phase Ib/II**	**Phase Ib**
# of patients	N=746	N=160	N=262
Design	▪ Dose escalation study of mosunetuzumab as single agent and in combination with Tecentriq ▪ Expansion cohorts for r/r FL, r/r DLBCL and subcutaneous in r/r NHL	▪ Mosunetuzumab plus CHOP ▪ Mosunetuzumab plus CHP plus Polivy ▪ Mosunetuzumab plus CHP-Polivy ▪ Rituximab plus CHP-Polivy	▪ Mosunetuzumab plus Polivy Randomised cohorts ▪ **ARM A:** mosunetuzumab SC plus Polivy **ARM B:** Rituximab plus Polivy
Primary endpoint	▪ Safety, tolerability, dose/schedule, PK, and response rates	▪ Safety/tolerability and response	▪ Safety/tolerability and response
Status	▪ FPI Q3 2015 ▪ Data in r/r NHL presented at ASH 2018 and 2019, and in r/r FL at ASH 2020 ▪ BTD granted by FDA Q2 2020 ▪ SC cohort FPI Q2 2021	▪ FPI Q1 2019 ▪ Data for M+CHOP presented at ASH 2020	▪ FPI Q3 2018 ▪ Initial data presented at ASCO 2021
CT Identifier	NCT02500407	NCT03677141	NCT03671018

FL=follicular lymphoma; DLBCL=diffuse large B cell lymphoma; r/r=relapsed/refractory; NHL=non-Hodgkin's lymphoma; CHOP=cyclophosphamide, doxorubicin, vincristine, and prednisone; CHP=cyclophosphamide, doxorubicin, and prednisone); ASH=American Society of Hematology; R=Rituximab; SC=subcutenous

Mosunetuzumab (CD20/CD3, RG7828)

Bispecific anti-CD20/CD3 antibody engaging T and B cells simultaneously

Indication	1L DLBCL & 2L DLBCL following 1L induction	R/R 2L+ FL
Phase/study	**Phase I**	**Phase Ib**
# of patients	N=92 + 80 (cohort C)	N=27
Design	▪ **Cohort A:** Mosunetuzumab monotherapy (after a response to prior systemic chemotherapy) ▪ **Cohort B:** Mosunetuzumab monotherapy (1L treatment in elderly/frail) ▪ **Cohort C:** Mosunetuzumab (subcutaneous) plus polatuzumab vedotin in 1L elderly/unfit	▪ Mosunetuzumab plus lenalidomide safety run-in for phase III ▪ Mosunetuzumab SC plus lenalidomide
Primary endpoint	▪ Safety/tolerability and response	▪ Safety/tolerability and response
Status	▪ FPI Q2 2019 – Cohort B ▪ FPI Q3 2019 – Cohort A ▪ Initial data presented at ASH 2020 (cohort B) ▪ Cohort C: FPI Q1 2021	▪ FPI Q3 2020
CT Identifier	NCT03677154	NCT04246086

FL=follicular lymphoma; DLBCL=diffuse large B cell lymphoma; r/r=relapsed/refractory

Inavolisib (RG6114, GDC-0077)

A potent, orally available, and selective PI3Kα inhibitor

Indication	PIK3CA-mutant HR+ mBC	PIK3CA mutant solid tumors and metastatic ER+ HER2-neg breast cancer
Phase/study	**Phase III INAVO120**	**Phase I**
# of patients	N=400	N=156
Design	▪ **Arm A:** GDC-0077 plus palbociclib plus fulvestrant ▪ **Arm B:** Placebo plus palbociclib plus fulvestrant	Monotherapy and in combination with SoC (letrozole; letrozole plus palbociclib; fulvestrant) ▪ **Stage 1:** Dose escalation ▪ **Stage 2:** Expansion
Primary endpoint	▪ Progression-free survival	▪ Safety, tolerability and PK
Status	▪ FPI Q1 2020	▪ FPI Q4 2016 ▪ Preclinical/molecule discovery data presented at AACR 2017 ▪ Data presented at SABCS 2019 and 2020
CT Identifier	NCT04191499	NCT03006172

AACR=American Association for Cancer Research; SABCS=San Antonio Breast Cancer Symposium

Giredestrant (SERD (3),RG6171, GDC-9545)

A selective estrogen receptor degrader or downregulator

Indication	ER+ HER2-neg metastatic breast cancer	ER+ HER2-neg Stage I-III operable breast cancer	Neoadjuvant ER+ breast cancer
Phase/study	**Phase I**	**Phase I**	**Phase II coopERA Breast Cancer**
# of patients	N=220	N=75	N=215
Design	▪ Dose escalation and expansion at recommended phase II dose (RP2D) ▪ Single agent and in combination with palbociclib and/or luteinizing hormone–releasing hormone (LHRH) agonist	▪ Open-label, pre-operative administration ▪ Dose escalation	▪ **ARM A:** Single agent followed by combo with palbociclib ▪ **ARM B:** anastrazole followed by anastrazole plus palbociclib
Primary endpoint	▪ Safety	▪ Safety, tolerability and PK/PD	▪ Safety, tolerability and PK/PD
Status	▪ FPI Q4 2017 ▪ Data presented at SABCS 2019, ASCO 2020 and ASCO 2021	▪ FPI Q3 2019 ▪ Data presented at ASCO 2021	▪ FPI Q3 2020 ▪ Interim data presented at ESMO 2021
CT Identifier	NCT03332797	NCT03916744	NCT04436744

SABCS=San Antonio Breast Cancer Symposium; ASCO=American Society of Clinical Oncology

Giredestrant (SERD (3), RG6171, GDC-9545)

A selective estrogen receptor degrader or downregulator

Indication	2L/3L ER+/HER2-negative metastatic breast cancer	1L ER+ metastatic breast cancer	Adjuvant ER+ breast cancer
Phase/study	**Phase II** **acelERA Breast Cancer**	**Phase III** **persevERA Breast Cancer**	**Phase III** **lidERA Breast Cancer**
# of patients	N=300	N=978	N=4,100
Design	▪ **Arm A:** giredestrant monotherapy ▪ **Arm B:** endocrine monotherapy (fulvestrant or aromatase inhibitor)	▪ **Arm A:** giredestrant plus palbociclib ▪ **Arm B:** letrozole plus palbociclib	▪ **Arm A:** giredestrant monotherapy ▪ **Arm B:** tamoxifen or aromatase inhibitor
Primary endpoint	▪ Progression-free survival	▪ Progression-free survival	▪ Invasive disease-free survival (IDFS)
Status	▪ FPI Q4 2020	▪ FPI Oct 2020	▪ FPI Q3 2021
CT Identifier	NCT04576455	NCT04546009	NCT04576455

rhPTX-2 (RG6354)

Recombinant human innate immunity protein pentraxin-2

Indication	Idiopathic pulmonary fibrosis (IPF)		Myelofibrosis
Phase/study	**Phase II**	**Phase III STARSCAPE**	**Phase II**
# of patients	N=117	N=658	N=125
Design	▪ Randomized, double-blind, placebo-controlled trial: 4-week screening period, 24-week randomized treatment period, 4-week follow-up visit (week 28) ▪ rhPTX-2 at days 1, 3 and 5 then every 4 weeks vs placebo	▪ Randomized, double-blind, placebo-controlled trial: 4-week screening period, 52-week randomized treatment period ▪ rhPTX-2 at days 1, 3 and 5 then every 4 weeks vs placebo	▪ Multiple dose study of rhPTX-2
Primary endpoint	▪ Least-squares mean change in forced vital capacity (FVC) percentage of predicted value from baseline to week 28	▪Absolute change from baseline to week 52 in FVC	▪ Bone marrow response rate
Status	▪ Study met primary endpoint ▪ Data published in JAMA 2018;319(22):2299-2307 and Lancet Respir Med 2019 Aug;7(8):657-664	▪ FPI Q1 2021	▪ Study completed Q1 2021
CT Identifier	NCT02550873	NCT04552899	NCT01981850

JAMA=Journal of the American Medical Association

Fenebrutinib (RG7845, GCD-0853)

Highly selective and reversible (noncovalent) bruton tyrosine kinase

Indication	Primary progressive multiple sclerosis (PPMS)	Relapsing multiple sclerosis (RMS)	
Phase/study	**Phase III FENtrepid**	**Phase III FENhance 1**	**Phase III FENhance 2**
# of patients	N=946	N=734	N=734
Design	▪ **ARM A:** Fenebrutinib twice daily oral ▪ **Arm B:** Ocrelizumab 2x300 mg IV every 24 weeks	▪ **Arm A:** Fenebrutinib twice daily oral ▪ **Arm B:** Teriflunomide once daily oral	▪ **Arm A:** Fenebrutinib twice daily oral ▪ **Arm B:** Teriflunomide once daily oral
Primary endpoint	▪ Time to onset of composite 12-week confirmed disability progression (cCDP12)	▪ Time to onset of composite 12-week confirmed disability progression (cCDP12) and annualized relapse rate	▪ Time to onset of composite 12-week confirmed disability progression (cCDP12) and annualized relapse rate
Status	▪ FPI Q4 2020	▪ FPI Q1 2021	▪ FPI Q1 2021
CT Identifier	NCT04544449	NCT04586023	NCT04586010

Etrolizumab (RG7413)

Humanized mAb against beta 7 integrin

Indication	Moderately to severely active Crohn's disease	Moderately to severely active Crohn's disease
Phase/study	**Phase III** **BERGAMOT** Induction and maintenance study	**Phase III** **JUNIPER** Open label extension study for BERGAMOT
# of patients	N=1,150	N=900
Design	▪ **ARM A:** Etrolizumab SC 210 mg (induction only) ▪ **ARM B:** Etrolizumab SC 105 mg and maintenance ▪ **ARM C:** Placebo	▪ Etrolizumab SC 105mg q4w
Primary endpoint	▪ Induction and maintenance of clinical remission	▪ Safety
Status	▪ FPI Q1 2015 ▪ Cohort 1 data presented at UEGW 2017 ▪ Recruitment completed Q2 2021	▪ FPI Q2 2015
CT Identifier	NCT02394028	NCT02403323

UEGW=United European Gastroenterology Week

Crovalimab (RG6107; SKY59)

A humanized monoclonal antibody against complement C5

Indication	Paroxysmal nocturnal hemoglobinuria (PNH)
Phase/study	**Phase I/II** **COMPOSER**
# of patients	N=59
Design	Healthy volunteers and treatment naïve and pretreated patients with PNH: ▪ **Part 1:** single ascending dose study in healthy subjects ▪ **Part 2:** intra-patient single ascending dose study in PNH patients ▪ **Part 3:** Multiple-dose study in PNH patients ▪ **Part 4:** Dose confirmation in PNH patients
Primary endpoint	▪ Safety, PK, PD
Status	▪ Part 1: FPI Q4 2016 ▪ Part 2/3: FPI Q2 2017 ▪ Part 4: FPI Q2 2019 ▪ Nonclinical data published in Scientific Reports 2017 Apr; 7(1):1080 ▪ Data presented for Part 2 and 3 at ASH 2018 and 2019
CT Identifier	NCT03157635

In collaboration with Chugai
ASH=American Society of Hematology

Crovalimab (RG6107; SKY59)

A humanized monoclonal antibody against complement C5

Indication	Paroxysmal Nocturnal Hemoglobinuria (PNH) patients switching from a C5 inhibitor	Paroxysmal Nocturnal Hemoglobinuria (PNH) C5 inhibitor naive patients	Paroxysmal Nocturnal Hemoglobinuria (PNH) C5 inhibitor naive patients (China only)
Phase/study	**Phase III COMMODORE 1**	**Phase III COMMODORE 2**	**Phase III COMMODORE 3**
# of patients	N=250	N=200	N=50
Design	▪ **Arm A:** Crovalimab ▪ **Arm B:** Eculizumab ▪ **Arm C:** Patients switching to crovalimab from ravulizumab, higher than labelled doses of eculizumab & C5 SNP patients (descriptive-arm)	▪ **Arm A:** Crovalimab ▪ **Arm B:** Eculizumab	▪ Crovalimab loading dose IV on Day 1, followed by weekly crovalimab subcutaneous doses for 4 weeks
Primary endpoint	▪ Non-inferiority of crovalimab compared to eculizumab - mean % change in LDH level (measure of haemolysis) from baseline to week 25	▪ Non-inferiority of crovalimab compared to eculizumab: - % pts with transfusion avoidance from baseline through week 25 - % pts with haemolysis control, as measured by LDH <=1.5ULN from week 5-25	▪ Percentage of patients with transfusion avoidance from baseline through week 25 ▪ Mean percentage of participants with hemolysis control (week 5 through week 25)
Status	▪ FPI Q3 2020	▪ FPI Q4 2020	▪ FPI Q1 2021 ▪ Recruitment completed Q3 2021
CT Identifier	NCT04432584	NCT04434092	NCT04654468

In collaboration with Chugai
LDH=Lactate Dehydrogenase

Crenezumab (RG7412)

Humanized mAb targeting all forms of Aβ

Indication	Alzheimer's Prevention Initiative (API) Colombia
Phase/study	**Phase II** Cognition study
# of patients	N=252
Design	▪ **ARM A:** PSEN1 E280A mutation carriers receive crenezumab SC ▪ **ARM B:** PSEN1 E280A mutation carriers receive placebo ▪ **ARM C:** non-mutation carriers receive placebo
Primary endpoint	▪ Change on Alzheimer's Prevention Initiative (API) Composite Cognitive Test total score at 260 weeks treatment
Status	▪ FPI Q4 2013 ▪ Recruitment completed Q1 2017
CT Identifier	NCT01998841

In collaboration with AC Immune
Aβ=amyloid-beta

Gantenerumab (RG1450)

Fully human mAb binding aggregated forms of Aβ

Indication	Prodromal to mild Alzheimer's disease		
Phase/study	**Phase III GRADUATE 1**	**Phase III GRADUATE 2**	**Phase II GRADUATION**
# of patients	N=1,016	N=1,016	N=192
Design	104-week subcutaneous treatment period: ▪ **ARM A:** Gantenerumab ▪ **ARM B:** Placebo	104-week subcutaneous treatment period: ▪ **ARM A:** Gantenerumab ▪ **ARM B:** Placebo	104-week subcutaneous treatment period: Gantenerumab subcutaneous treatment Q1W dosing regimen
Primary endpoint	▪ Change in CDR-SOB at 27 months	▪ Change in CDR-SOB at 27 months	▪ Change from baseline in deposited amyloid (PET centiloid levels)
Status	▪ FPI Q2 2018 ▪ Recruitment completed Q2 2020	▪ FPI Q3 2018 ▪ Recruitment completed Q2 2020	▪ FPI Q4 2020 ▪ Recruitment completed Q3 2021
	▪ BTD granted by FDA Sep 2021		
CT Identifier	NCT03443973	NCT03444870	NCT04592341

In collaboration with MorphoSys AG

Aβ=amyloid-beta; CDR-SOB=Clinical Dementia Rating Scale Sum of Boxes

Gantenerumab (RG1450)

Fully human mAb binding aggregated forms of Aβ

Indication	Prodromal Alzheimer's disease	Mild Alzheimer's disease
Phase/study	**Phase II/III SCarlet RoAD**	**Phase III Marguerite RoAD**
# of patients	N=799	N=389
Design	104-week subcutaneous treatment period: ▪ **ARM A:** Gantenerumab (225 mg) ▪ **ARM B:** Gantenerumab (105 mg) ▪ **ARM C:** Placebo	104-week subcutaneous treatment period: ▪ **ARM A:** Gantenerumab ▪ **ARM B:** Placebo
Primary endpoint	▪ Change in CDR-SOB at 2 years ▪ Sub-study: change in brain amyloid by PET at 2 years	▪ Change in ADAS-Cog and CDR-SOB at 2 years (co-primary)
Status	▪ Phase I PET data: *Archives of Neurology*, 2012 Feb;69(2):198-207 ▪ Recruitment completed Q4 2013 ▪ Dosing stopped due to futility Q4 2014 ▪ FPI in open label extension study Q4 2015 ▪ Published in Alzheimers Res Ther 2017 Dec 8;9(1):95	▪ FPI Q1 2014 ▪ Recruitment stopped Q4 2015 ▪ FPI Q1 2016 for open label extension
	▪ 36 OLE data published in J Prev Alzheimers Dis 2021;8(1):3-6	
CT Identifier	NCT01224106	NCT02051608

In collaboration with MorphoSys AG

Aβ=amyloid-beta; CDR-SOB=Clinical Dementia Rating Scale Sum of Boxes; PET= positron emission tomography; ADAS-cog=Alzheimer's Disease Assessment Scale cognitive subscale; AAIC=Alzheimer's Association International Conference; CTAD=Clinical Trials on Alzheimer's Disease; AD/PD=Alzheimer's & Parkinson's Diseases Congress; AAN=American Academy of Neurology; MRI=Magnetic resonance imaging

Tominersen (RG6042, HTT ASO)

Antisense oligonucleotide (ASO) targeting human HTT mRNA

Indication	Huntington's disease	
Phase/study	**Phase I/IIa**	**Phase II OLE**
# of patients	N=46	N=46
Design	▪ Multiple ascending doses of RG6042 administered intrathecally to adult patients with early manifest Huntington's Disease	▪ Patients from phase I are enrolled into OLE
Primary endpoint	▪ Safety, tolerability, PK and PD	▪ Longer term safety, tolerability, PK, PD.
Status	▪ FPI Q3 2015 ▪ Data presented at CHDI 2018 and AAN 2018 ▪ PRIME designation granted 2018 ▪ Published in *NEJM* 2019; 380:2307-2316	▪ FPI Q1 2018 ▪ PK/PD data presented at AAN 2019 ▪ Update presented at CHDI 2020 ▪ Study completed, patients moved to GEN-EXTEND OLE
CT Identifier	NCT02519036	NCT03342053

In collaboration with Ionis Pharmaceuticals

AAN=American Academy of Neurology; *NEJM*=New England Journal of Medicine

Tominersen (RG6042, HTT ASO)

Antisense oligonucleotide (ASO) targeting human HTT mRNA

Indication	Huntington's disease	
Phase/study	**Phase III** **Generation HD1**	**Phase III** **GEN-EXTEND**
# of patients	N=791	N=1,050
Design	▪ **ARM A:** RG6042 120mg bimonthly ▪ **ARM B:** RG6042 120mg every four months ▪ **ARM C:** Placebo bimonthly	Open-Label Extension study in patients participating in prior Roche and Genentech sponsored studies ▪ **Arm A:** RG6042 120mg bimonthly ▪ **Arm B:** RG6042 120mg every four months
Primary endpoint	▪ cUHDRS globally ▪ TFC USA only	▪ Long term safety, tolerability
Status	▪ FPI Jan 2019 ▪ Q1 2019 protocol modified to allow for bi-monthly vs four-monthly dosing, FPI for new protocol July 2019 ▪ Recruitment completed Q2 2020 ▪ Dosing stopped in Q1 2021 based on IDMC recommendation regarding the potential benefit/risk profile for study participants. No new safety signals identified.	▪ FPI April 2019 ▪ Dosing stopped in Q1 2021
CT Identifier	NCT03761849	NCT03842969

In collaboration with Ionis Pharmaceuticals

cUHDRS=composite Unified Huntington's Disease Rating Scale; TFC=total function capacity; IDMC=Independent Data Monitoring Committee

Faricimab (RG7716)

Bispecific antibody to simultaneously bind Ang-2 and VEGF-A

Indication	Center-involving diabetic macular edema (CI-DME)	
Phase/study	**Phase III YOSEMITE**	**Phase III RHINE**
# of patients	N=940	N=951
Design	▪ **ARM A:** Faricimab q8w ▪ **ARM B:** Faricimab PTI up to q16w ▪ **ARM C:** Aflibercept, q8w	▪ **ARM A:** Faricimab q8w ▪ **ARM B:** Faricimab PTI up to q16w ▪ **ARM C:** Aflibercept, q8w
Primary endpoint	▪ Change from baseline in BCVA at 1 year	▪ Change from baseline in BCVA at 1 year
Status	▪ FPI Q3 2018 ▪ Recruitment completed Q3 2019 ▪ Study met primary endpoint Q4 2020 ▪ Data presented at Angiogenesis 2021	▪ FPI Q4 2018 ▪ Recruitment completed Q3 2019 ▪ Study met primary endpoint Q4 2020 ▪ Data presented at Angiogenesis 2021
	▪ Filed in US and EU Q2 2021	
CT Identifier	NCT03622580	NCT03622593

PTI=Personalized Treatment Interval; BCVA=best corrected visual acuity

Faricimab (RG7716)

Bispecific antibody to simultaneously bind Ang-2 and VEGF-A

Indication	Neovascular age related macular degeneration (nAMD)	
Phase/study	**Phase III TENAYA**	**Phase III LUCERNE**
# of patients	N=671	N=658
Design	▪ **ARM A:** Faricimab 6.0mg Q16 flex after 4 initiating doses (IDs) ▪ **ARM B:** Aflibercept 2.0mg Q8 after 3 IDs	▪ **ARM A:** Faricimab 6.0mg Q16 flex after 4 initiating doses (IDs) ▪ **ARM B:** Aflibercept 2.0mg Q8 after 3 IDs
Primary endpoint	▪ Change from baseline in BCVA Week 40, 44 & 48	▪ Change from baseline in BCVA Week 40, 44 & 48
Status	▪ FPI Q1 2019 ▪ Recruitment completed Q4 2019 ▪ Study met primary endpoint Jan 2021 ▪ Data presented at Angiogenesis 2021	▪ FPI Q1 2019 ▪ Recruitment completed Q4 2019 ▪ Study met primary endpoint Jan 2021 ▪ Data presented at Angiogenesis 2021
	▪ Filed in US and EU Q2 2021	
CT Identifier	NCT03823287	NCT03823300

BCVA=best corrected visual acuity

Faricimab (RG7716)

Bispecific antibody to simultaneously bind Ang-2 and VEGF-A

Indication	Macular edema secondary to branch retinal vein occlusion	Macular edema secondary to central retinal vein occlusion
Phase/study	**Phase III BALATON**	**Phase III COMINO**
# of patients	N=570	N=750
Design	▪ **ARM A:** Faricimab, q4w/PTI ▪ **ARM B:** Aflibercept, q4w	▪ **ARM A:** Faricimab, q4w/PTI ▪ **ARM B:** Aflibercept, q4w
Primary endpoint	▪ Change from baseline in BCVA at week 24	▪ Change from baseline in BCVA at week 24
Status	▪ FPI Q1 2021	▪ FPI Q1 2021
CT Identifier	NCT04740905	NCT04740931

PTI=Personalized Treatment Interval; BCVA=best corrected visual acuity

Port Delivery System with ranibizumab

First eye implant to achieve sustained delivery of a biologic medicine

Indication	wAMD		
Phase/study	**Phase III Archway**	**Phase II+III extension Portal**	**Phase IIIb Velodrome**
# of patients	N=418	N=500	N=442
Design	▪ **ARM A:** PDS with ranibizumab every 24 weeks ▪ **ARM B:** Intravitreal ranibizumab every 4 weeks	▪ Patients from LADDER or Archway will receive refills of 100 mg/mL ranibizumab q24w (patients without the PDS will receive the PDS and subsequent refills)	▪ **ARM A:** PDS with ranibizumab every 36 weeks ▪ **ARM B:** PDS with ranibizumab every 24 weeks
Primary endpoint	▪ Change in BCVA from baseline at the average of week 36 and week 40	▪ Safety and long term efficacy	▪ Change in BCVA from baseline averaged over weeks 68 and 72
Status	▪ FPI Q3 2018 ▪ Recruitment completed Q2 2019 ▪ Study met primary endpoint Q2 2020 ▪ Primary endpoint data presented at ASRS 2020 and 44/48 week data at Angiogenesis 2021 ▪ Filed in US (priority review) and EU Q2 2021	▪ FPI Q3 2018	▪ FPI achieved July 2021
CT Identifier	NCT03677934	NCT03683251	NCT04657289

BCVA=best corrected visual acuity; wAMD=wet age-related macular degeneration; ASRS=American Society of Retinal Specialists

Port Delivery System with ranibizumab

First eye implant to achieve sustained delivery of a biologic medicine

Indication	DME	Diabetic retinopathy without center-involved diabetic macular edema
Phase/study	**Phase III Pagoda**	**Phase III Pavilion**
# of patients	N=545	N=160
Design	▪ **ARM A:** PDS with ranibizumab every 24 weeks ▪ **ARM B:** Intravitreal ranibizumab every 4 weeks	▪ **Arm A:** Intravitreal ranibizumab (X2) followed by PDS implant (refill every 36 weeks) ▪ **Arm B:** Q4W comprehensive clinical monitoring until participants receive PDS (refill every 36 weeks)
Primary endpoint	▪ Change in BCVA from baseline at the average of week 48 and week 52	▪ Percentage of participants with a ≥2-step improvement from baseline on the ETDRS-DRSS at Week 52
Status	▪ FPI Q3 2019 ▪ Recruitment completed Q2 2021	▪ FPI Q3 2020 ▪ Recruitment completed Q3 2021
CT Identifier	NCT04108156	NCT04503551

DME=diabetic macular edema; BCVA=best corrected visual acuity; ETDRS=Early Treatment Diabetic Retinopathy Study; DRSS=Diabetic Retinopathy Severity Scale

AT-527 (RG6422)

Viral RNA polymerase inhibitor

Indication	Non-hospitalised adult patients with mild or moderate COVID-19	Adult patients SARS-COV-2 positive in an outpatient setting
Phase/study	**Phase II** **MOONSONG**	**Phase III** **MORNINGSKY**
# of patients	N=220	N=1,386
Design	▪ **ARM A:** AT-527 ▪ **ARM B:** Placebo	▪ **Arm A:** AT-527 550mg BID ▪ **Arm B:** Placebo
Primary endpoint	▪ Change from baseline in the amount of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) virus RNA	▪ Time to symptom alleviation
Status	▪ FPI Q1 2021 ▪ Primary endpoint not met Oct 2021	▪ FPI Q2 2021
CT Identifier	NCT04709835	NCT04889040

In collaboration with Atea Pharmaceuticals

Pipeline summary

Marketed products additional indications

Global Development late-stage trials

pRED (Roche Pharma Research & Early Development)

gRED (Genentech Research & Early Development)

Spark

Roche Group YTD Sep 2021 sales

Diagnostics

Foreign exchange rate information

pRED oncology development programs –1

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Oncology					
TYRP1 x CD3 (RG6232)	Melanoma	I	210	FPI Q4 2020	NCT04551352
FAP-4-1BBL (RG7827)	Solid tumors	I	~150	FPI Q2 2018 Data presented at ESMO 2020 Recruitment completed Q2 2021	
	3L+ MSS mCRC	I	80	FPI July 2021 Combination study with cibisatamab	NCT04826003
CD19-4-1BBL (RG6076)	R/R B cell non-Hodgkin's lymphoma	I	207	Part I: FPI Q3 2019; Part II: FPI Q3 2020	NCT04077723
PD1-IL2v (RG6279)	Solid tumors	I	440	FPI Q2 2020	NCT04303858
cibisatamab (CEA x CD3, RG7802)	CEA-positive solid tumors	Ia	149	FPI Q4 2014 Data presented at ASCO 2017	NCT02324257
		Ib	228	FPI Q1 2016 Data presented at ASCO 2017	NCT02650713
	3L+ MSS mCRC	Ib	46	FPI Q1 2019	NCT03866239
PD1-TIM3 (RG7769)	Solid tumors	Ia/b	280	FPI Q4 2018	NCT03708328
PD1-LAG3 (RG6139)	Solid tumors	I	320	FPI Q4 2019	NCT04140500
PD1-LAG3, PD1-TIM3 (RG6139, RG7769)	Solid tumors	II	255	FPI Q2 2021 3-arm, randomized, compared with nivolumab	NCT04785820 TALIOS

pRED oncology development programs –2

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Oncology					
CD25 (RG6292)	Solid tumors	I	110	FPI Q4 2019	NCT04158583
	Advanced and metastatic solid tumors	I	160	FPI Jan 2021	NCT04642365
TLR7 agonist (4) (RG6115)	Hepatocellular carcinoma	I	100	FPI July 2020	NCT04338685
Anti-GPRC5D (RG6234)	Multiple myeloma	I	240	FPI Q4 2020	NCT04557150
HLA-A2-WT1 x CD3 (RG6007)	AML	I	160	FPI Q4 2020	NCT04580121
FAP-CD40 (RG6189)	Solid tumors	I	180	FPI Q2 2021	

pRED neuroscience development programs

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Neuroscience					
Brain Shuttle-gantenerumab (BS-gantenerumab, RG6102)	Alzheimer's disease	II	~120	FPI Q1 2021	NCT04023994
Brain Shuttle-CD20 (BS-CD20, RG6035)	Multiple sclerosis	I	30	FPI Q3 2021	ISRCTN16295177
ralmitaront (partial TAAR1 agonist, RG7906)	Schizophrenia	II	36	FPI Q4 2018; Recruitment completed Q3 2019	
		II	247	FPI Q4 2019	NCT03669640 (TWAIN I)
		II	308	FPI Q3 2020	NCT04512066 (TWAIN II)
prasinezumab[1] (anti-αSynuclein, RG7935, PRX002)	Parkinson's disease	II	316	Study did not meet its primary objective, but showed signals of efficacy on core motor signs in PD. Key study data presented at MDS 2020, ADPD and MDS 2021. Part 3 (OLE) ongoing	NCT03100149 (PASADENA)
		IIb	575	FPI Q2 2021	NCT04777331 (PADOVA)
GABA-Aa5 PAM (RG7816)	Autism spectrum disorder	II	105	FPI Q1 2021	NCT04299464 (Aurora)
NME (RG7637)	Neurodevelopmental disorders	I	80	FPI July 2020	NCT04475848
UBE3A LNA (RG6091)	Angelman syndrome	I	66	FPI Q3 2020	NCT04428281
NME (RG6182)	Neurodegenerative disorder	I	30	FPI Q4 2020	

Partner: [1]Prothena; BS=Brain Shuttle

pRED immunology and ophthalmology development programs

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Immunology					
IgG-IL2 (RG7835)	Ulcerative Colitis	Ib	65	FPI Q2 2019	NCT03943550
	Autoimmune diseases	II	84	FPI Q2 2021	NCT04790916 GOLDSTONE
Ophthalmology					
NME (RG6179)[1]	DME	I	50	FPI July 2019	
VEGF-Ang2 DutaFab (RG6120)	nAMD	I	50	FPI Q4 2020	NCT04567303
NME (RG7774)	Retinal disease	II	180	FPI Q2 2020	NCT04265261 (CANBERRA)

Partner: [1]Sesen Bio

pRED infectious diseases development programs

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Infectious Diseases					
TLR7 agonist (3) (RG7854)	Chronic hepatitis B	I	150	FPI Q4 2016 Data presented at APASL 2019	NCT02956850
CpAM (RG7907)	Chronic hepatitis B	I/II	192	FPI Q4 2016 Data presented at EASL 2018, 2019 & 2020 Part 1 (healthy volunteers) published in Antimicrob Agents Chemother DOI: 10.1128/AAC.01323-20	NCT02952924
		I	22	FPI Q1 2021 Recruitment completed Q2 2021	NCT04729309
TLR7 agonist (3)/ CpAM/siRNA (RG7854/RG7907/RG6346)	Chronic hepatitis B	II	65	FPI July 2020	NCT04225715 (PIRANGA)
PDL1 LNA (RG6084)	Chronic hepatitis B	I	35	FPI Q1 2019 Part Ia complete, part Ib initiated	
Abx MCP (RG6006)	A. baumannii infections	I	168	FPI Q4 2020	NCT04605718

Abx MCP=antibiotic macrocyclic peptide

Pipeline summary

Marketed products additional indications

Global Development late-stage trials

pRED (Roche Pharma Research & Early Development)

gRED (Genentech Research & Early Development)

Spark

Roche Group YTD Sep 2021 sales

Diagnostics

Foreign exchange rate information

gRED oncology development programs

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Oncology					
KRAS G12C (RG6330)	Metastatic solid tumors with KRAS G12C mutation	I	108	FPI Q3 2020	NCT04449874
cevostamab (anti-FcRH5 x CD3; RG6160)	R/R multiple myeloma	I	300	FPI Q3 2017 Data presented at ASH 2020	NCT03275103
runimotamab (HER2 x CD3, RG6194)	Metastatic HER2-expressing cancers	I	440	FPI Q2 2018	NCT03448042
NME (RG6286)	Locally advanced or metastatic colorectal cancer	I	67	FPI Q3 2020	NCT04468607
IL15/IL15Ra-Fc (RG6323)[2]	Solid tumors	I/II	250	FPI Q1 2020	NCT04250155
autogene cevumeran (Individualized Neoantigen-Specific Therapy (iNeST); RG6180)[3]	Solid tumors	Ia/IIb	770	FPI Q4 2017 Data presented at AACR 2020	NCT03289962
	1L advanced melanoma	II	132	FPI Q1 2019	NCT03815058 (IMcode001)
SHP2i (RG6344)	Solid tumors	Ia	~50	FPI Q1 2020	NCT04252339
belvarafenib[4]	nRASmt CPI-experienced melanoma	Ib	83	FPI Q2 2021	NCT04835805

Partner: [1]Affimed, [2]Xencor, [3]BioNTech, [4]Hanmi

gRED immunology and ophthalmology development programs

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Immunology					
efmarodocokin alfa (IL-22Fc, RG7880)	Inflammatory diseases	Ib	90	FPI Q2 2016	NCT02749630
	Inflammatory bowel disease	II	195	FPI Q4 2018	NCT03558152
	aGVHD	Ib	18	FPI Q4 2020	NCT04539470
NME (RG6287, GDC-8264)	Inflammatory bowel disease	I	68	FPI Q1 2020 Recruitment completed Q3 2021	
Anti-tryptase (RG6173, MTPS9579A)	Asthma	I	70	FPI Q1 2018	
	Asthma	IIa	134	FPI Q4 2019 Recruitment completed Q1 2021	NCT04092582
NME (RG6315, MTBT1466A)	Immunologic disorders	I	~24	FPI Q3 2020	
astegolimab (Anti-ST2, (RG6149, AMG 282, MSTT1041A)[1]	Chronic Obstructive Pulmonary Disease	IIb	930	FPI Oct 2021	NCT05037929
Ophthalmology					
HtrA1 (RG6147)	Geographic atrophy	II	360	FPI Q2 2019	NCT03972709 (GALLEGO)
NME (RG6312)	Geographic atrophy	Ia	63	FPI Q4 2020	NCT04615325

Partner: [1]Amgen

gRED neuroscience and metabolic diseases development programs

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Neuroscience					
Semorinemab (RG6100)[1]	Prodromal to mild Alzheimer's disease	II	457	FPI Q4 2017 Primary endpoint not met Q3 2020 Data presented at CTAD 2020	NCT03289143 (TAURIEL)
	Mild-to-Moderate Alzheimer's disease	II	272	FPI Q1 2019 One of two co-primary endpoints met Q3 2021	NCT03828747 (LAURIET)
Metabolic Diseases					
FGFR1 x KLB (RG7992)	Metabolic diseases	Ia	79	FPI Q4 2015 Recruitment completed Q1 2017	NCT02593331
	Metabolic diseases	Ib	140	FPI Q1 2017 Recruitment completed Q2 2019	NCT03060538
	NASH	II	260	FPI Q3 2020	NCT04171765
NME (RG6338)	Metabolic diseases	Ia/Ib	116	FPI Q2 2021	

Partner: [1]AC Immune

Pipeline summary

Marketed products additional indications

Global Development late-stage trials

pRED (Roche Pharma Research & Early Development)

gRED (Genentech Research & Early Development)

Spark

Roche Group YTD Sep 2021 sales

Diagnostics

Foreign exchange rate information

Hemophilia A

Unique gene therapy platform

Molecule	SPK-8011 (RG6357)		SPK-8016 (RG6358)
Indication	**Hemophilia A**		**Hemophilia A with inhibitors to Factor VIII**
Phase/study	**Phase I**	**Phase I/II**	**Phase I/II**
# of patients	N=100	N=30	N=30
Design	▪ Long term follow up study of patients who have received SPK-8011 in any prior Spark-sponsored SPK-8011 study	▪ Gene transfer, dose-finding safety, tolerability, and efficacy study of SPK-8011	▪ Gene transfer, dose-finding safety, tolerability, and efficacy study of SPK-8016 in individuals with FVIII inhibitors
Primary endpoint	▪ Safety	▪ Safety and changes from baseline in FVIII activity levels at week 52	▪ Safety; peak and steady state FVIII activity levels at week 52
Status	▪ Ongoing	▪ FPI Q1 2017 ▪ Updated data presented at ISTH 2020 and 2021 ▪ Recruitment completed Q1 2021	▪ FPI Q1 2019
CT Identifier	NCT03432520	NCT03003533	NCT03734588

Choroideremia

Unique gene therapy platform

Molecule	**SPK-7001 (RG6367)**
Indication	**Choroideremia**
Phase/study	**Phase I/II**
# of patients	N=15
Design	▪ Safety study in subjects with CHM (choroideremia) gene mutations
Primary endpoint	▪ Safety and tolerability
Status	▪ FPI Q1 2015 ▪ Recruitment completed Q2 2017
CT Identifier	NCT02341807

Pompe disease

Unique gene therapy platform

Molecule	**SPK-3006 (RG6359)**
Indication	**Pompe disease**
Phase/study	**Phase I/II RESOLUTE**
# of patients	N=20
Design	▪ Gene transfer study for late-onset Pompe disease
Primary endpoint	▪ Safety
Status	▪ FPI Q4 2020
CT Identifier	NCT04093349

Pipeline summary

Marketed products additional indications

Global Development late-stage trials

pRED (Roche Pharma Research & Early Development)

gRED (Genentech Research & Early Development)

Spark

Roche Group YTD Sep 2021 sales

Diagnostics

Foreign exchange rate information

Geographical sales split by Divisions and Group*

CHFm	YTD Sep 2020	YTD Sep 2021	% change CER
Pharmaceuticals Division	**34,317**	**33,379**	**0**
United States	18,389	16,707	**-5**
Europe	6,268	6,610	**+3**
Japan	2,802	3,186	**+20**
International	6,858	6,876	**+2**
Diagnostics Division	**9,662**	**13,305**	**+39**
United States	2,503	2,845	**+19**
Europe	3,000	4,849	**+58**
Japan	367	505	**+45**
International	3,792	5,106	**+36**
Group	**43,979**	**46,684**	**+8**
United States	20,892	19,552	**-2**
Europe	9,268	11,459	**+21**
Japan	3,169	3,691	**+23**
International	10,650	11,982	**+14**

CER=Constant Exchange Rates; * Geographical sales split shown here does not represent operational organization

Pharma Division sales YTD Sep 2021

Top 20 products

	Global		US		Europe		Japan		International	
	CHFm	% CER	CHFm	% CER	CHFm	% CER	CHFm	% CER	CHFm	% CER
Ocrevus	3,721	17	2,779	11	689	37	-	-	253	50
Perjeta	2,974	4	1,079	-1	847	-3	200	-4	848	24
Actemra / RoActemra	2,690	30	1,300	44	663	14	285	12	442	29
Tecentriq	2,477	27	1,272	14	520	17	387	81	298	66
Avastin	2,390	-39	745	-48	346	-69	502	-1	797	-12
Hemlibra	2,172	42	1,317	35	440	65	260	21	155	138
Herceptin	2,061	-32	501	-55	407	-24	63	-39	1,090	-15
MabThera	1,968	-41	1,197	-47	203	-35	31	-34	537	-26
Kadcyla	1,460	16	613	4	508	23	94	57	245	26
Xolair	1,416	2	1,416	2	-	-	-	-	-	-
Ronapreve	1,084	-	-	-	568	-	360	-	156	-
Lucentis	1,017	-5	1,017	-5	-	-	-	-	-	-
Alecensa	988	19	263	7	221	12	181	10	323	47
TNKase / Activase	921	-5	879	-5	-	-	-	-	42	4
Esbriet	789	-4	556	-4	202	-1	-	-	31	-25
Gazyva	501	8	232	9	167	5	47	-3	55	29
CellCept	453	-2	35	-23	115	-5	52	-8	251	5
Pulmozyme	414	-15	262	-20	89	-13	-	-17	63	15
Evrysdi	396	*	268	*	62	-	3	-	63	-
Mircera	331	-7	-	-	41	-11	90	-17	200	-1
Pharma Division	**33,379**	**0**	**16,707**	**-5**	**6,610**	**3**	**3,186**	**20**	**6,876**	**2**

CER = Constant Exchange Rates (avg. full year 2020)

Pharma Division sales YTD Sep 2021

New products

	Global		US		Europe		Japan		International	
	CHFm	% CER	CHFm	% CER	CHFm	% CER	CHFm	% CER	CHFm	% CER
Erivedge	196	-3	128	-5	44	-6	-	-	24	18
Perjeta	2,974	4	1,079	-1	847	-3	200	-4	848	24
Kadcyla	1,460	16	613	4	508	23	94	57	245	26
Gazyva	501	8	232	9	167	5	47	-3	55	29
Esbriet	789	-4	556	-4	202	-1	-	-	31	-25
Cotellic	35	-9	10	21	13	-20	-	-	12	-13
Alecensa	988	19	263	7	221	12	181	10	323	47
Tecentriq	2,477	27	1,272	14	520	17	387	81	298	66
Ocrevus	3,721	17	2,779	11	689	37	-	-	253	50
Hemlibra	2,172	42	1,317	35	440	65	260	21	155	138
Xofluza	(5)	-	(8)	-	-	-	-	-	3	69
Polivy	167	35	67	-17	63	48	29	-	8	*
Rozlytrek	35	137	23	90	5	*	5	176	2	*
Phesgo	213	*	98	*	92	-	-	-	23	-
Enspryng	69	*	15	249	1	*	52	*	1	*
Evrysdi	396	*	268	*	62	-	3	-	63	-
Gavreto	5	-	5	-	-	-	-	-	-	-
Ronapreve	1,084	-	-	-	568	-	360	-	156	-
Total	**17,277**	**30**	**8,717**	**15**	**4,442**	**40**	**1,618**	**77**	**2,500**	**53**

CER = Constant Exchange Rates (avg. full year 2020); * over 500%; Negative Sales for Xofluza due to Sales returns in 2021

Pharma Division CER sales growth[1] in %

Global top 20 products

	Q1/20	Q2/20	Q3/20	Q4/20	Q1/21	Q2/21	Q3/21
Ocrevus	38	12	37	10	16	31	7
Perjeta	22	12	17	20	2	7	2
Actemra / RoActemra	30	40	27	29	22	12	57
Tecentriq	99	54	49	35	26	31	23
Avastin	-13	-24	-30	-35	-40	-40	-37
Hemlibra	146	59	57	45	33	58	37
Herceptin	-24	-33	-38	-43	-35	-35	-26
MabThera	-15	-32	-33	-43	-46	-34	-42
Kadcyla	55	26	33	26	17	21	11
Xolair	3	1	3	3	-6	3	8
Ronapreve	-	-	-	-	-	-	-
Lucentis	-13	-25	-5	-22	-7	2	-10
Alecensa	43	27	37	54	14	25	18
TNKase / Activase	11	-3	1	11	-17	3	3
Esbriet	22	2	5	-9	-8	1	-5
Gazyva	49	23	15	6	-2	18	10
CellCept	7	-2	-11	-1	-5	-3	3
Pulmozyme	10	-10	-16	-17	-23	-13	-7
Evrysdi	-	-	-	-	-	-	*
Mircera	-8	-7	-26	-24	-13	-10	1

CER = Constant Exchange Rates; [1] Q1-Q4/20 vs Q1-Q4/19 ; Q1-Q3/21 vs Q1-Q3/20

Pharma Division CER sales growth[1] in %

Top 20 products by region

	US				Europe				Japan				International			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Ocrevus	5	9	28	0	20	37	40	36	–	–	–	–	55	77	41	35
Perjeta	0	-2	-3	2	4	-3	2	-8	0	-11	-2	0	135	23	34	16
Actemra / RoActemra	19	10	3	143	24	12	20	10	1	-2	15	25	114	134	27	-14
Tecentriq	27	13	19	10	18	14	20	16	75	82	86	75	86	84	56	62
Avastin	-47	-48	-46	-50	-61	-68	-69	-69	-7	-8	0	5	8	-4	-20	-11
Hemlibra	30	21	49	36	99	71	123	26	15	11	21	29	325	214	92	138
Herceptin	-59	-57	-55	-52	-31	-25	-25	-20	-43	-43	-37	-37	-29	-16	-22	-7
MabThera	-49	-53	-37	-49	-36	-45	-21	-33	-34	-37	-34	-30	-24	-23	-30	-25
Kadcyla	11	5	6	0	34	24	29	16	41	54	57	59	50	28	35	16
Xolair	3	-6	3	8	–	–	–	–	–	–	–	–	–	–	–	–
Ronapreve	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lucentis	-22	-7	2	-10	–	–	–	–	–	–	–	–	–	–	–	–
Alecensa	-4	-2	13	9	22	11	19	7	29	8	10	11	*	44	59	40
TNKase / Activase	11	-17	2	2	–	–	–	–	–	–	–	–	1	-10	6	17
Esbriet	-12	-8	0	-2	2	-10	9	0	–	–	–	–	-9	0	-7	-73
Gazyva	5	0	28	3	15	-11	19	10	-9	1	-17	10	-1	21	23	43
CellCept	-6	-31	-18	-18	-10	-22	17	-2	1	-9	-7	-7	4	11	-8	13
Pulmozyme	-24	-28	-21	-10	4	-20	-7	-10	-15	-23	-9	-18	-7	3	40	12
Evrysdi	–	–	–	*	–	–	–	–	–	–	–	–	–	–	–	–
Mircera	–	–	–	–	-17	-23	-7	-3	-18	-18	-15	-18	-30	-8	-8	13

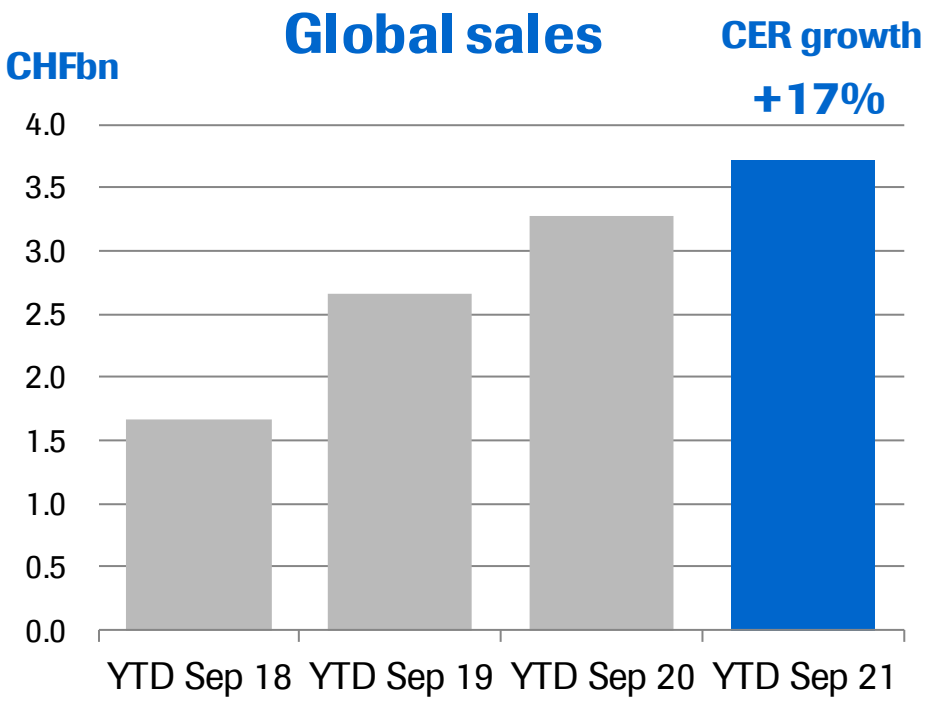
CER = Constant Exchange Rates; * over 500%; [1] Q4/20 vs Q4/19; Q1-Q3/21 vs Q1-Q3/20

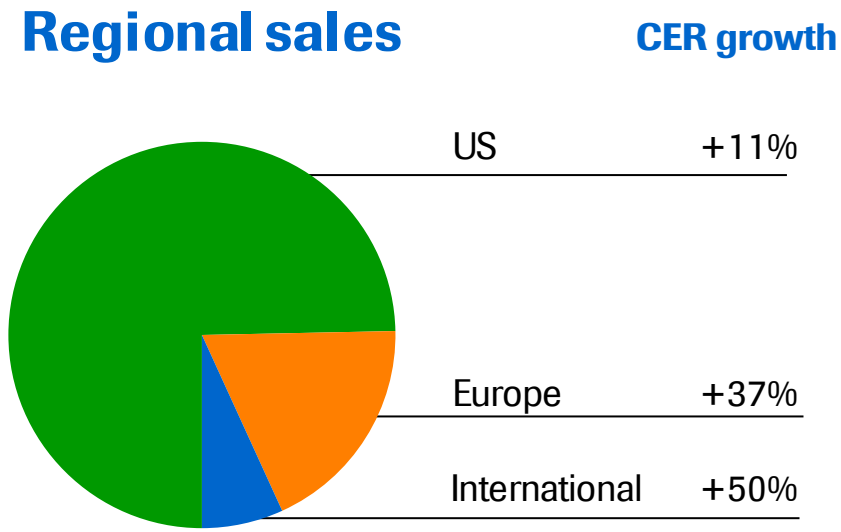
CER sales growth (%)
Quarterly development

	2020 vs. 2019				2021 vs. 2020		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Pharmaceuticals Division	**7**	**-6**	**-4**	**-7**	**-9**	**4**	**5**
United States	3	-10	-5	-13	-14	0	0
Europe	14	-3	2	-8	-6	15	1
Japan	3	-7	-13	-5	-7	7	60
International	16	5	-2	11	0	4	2
Diagnostics Division	**5**	**2**	**18**	**28**	**55**	**48**	**18**
Roche Group	**7**	**-4**	**1**	**1**	**3**	**14**	**8**

CER=Constant Exchange Rates

Ocrevus



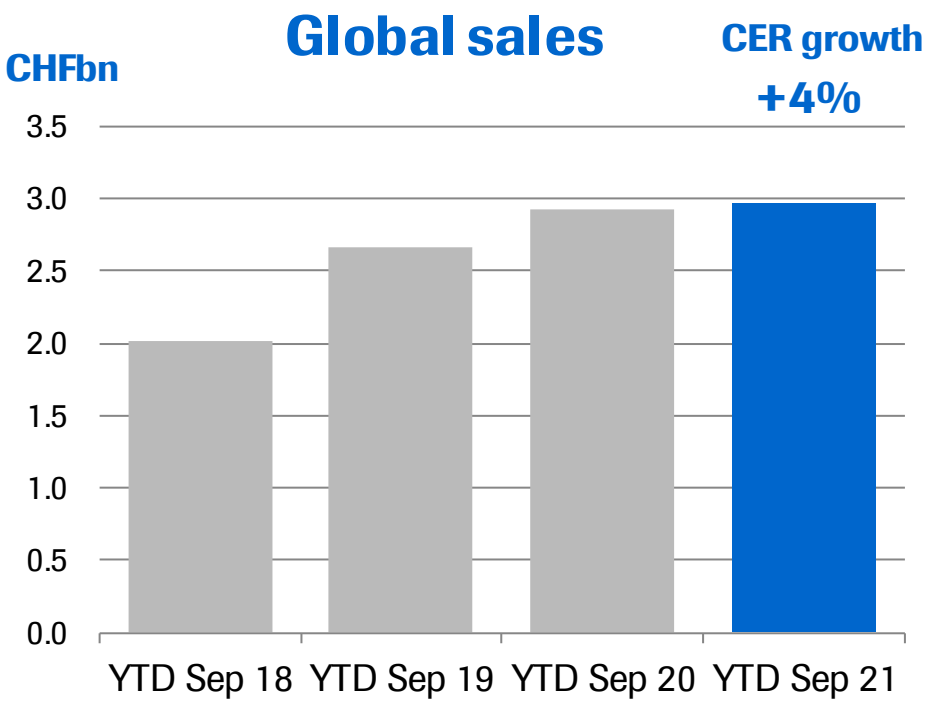


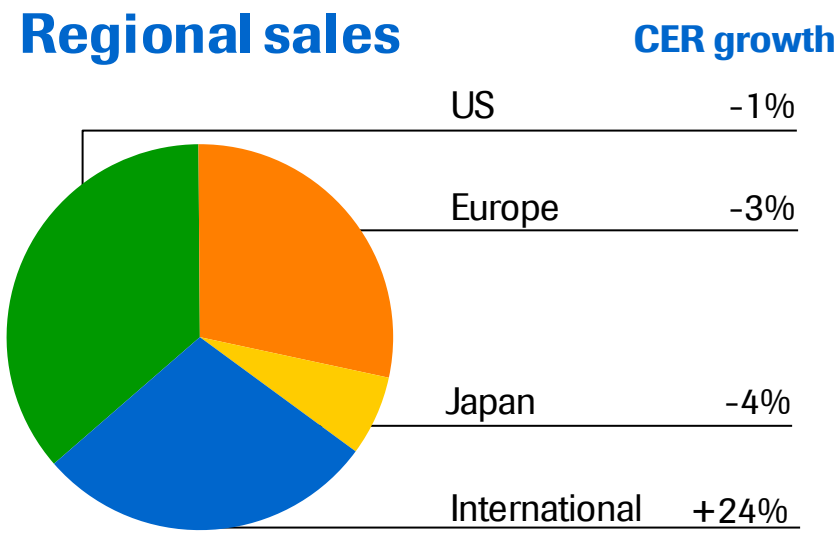
YTD Sep 2021 sales of CHF 3,721m

- US: Moving into earlier lines displacing orals; COVID-19 impact still felt
- EU: Uptake dynamics in EU5 strong despite COVID-19 impact still felt

CER=Constant Exchange Rates

Perjeta



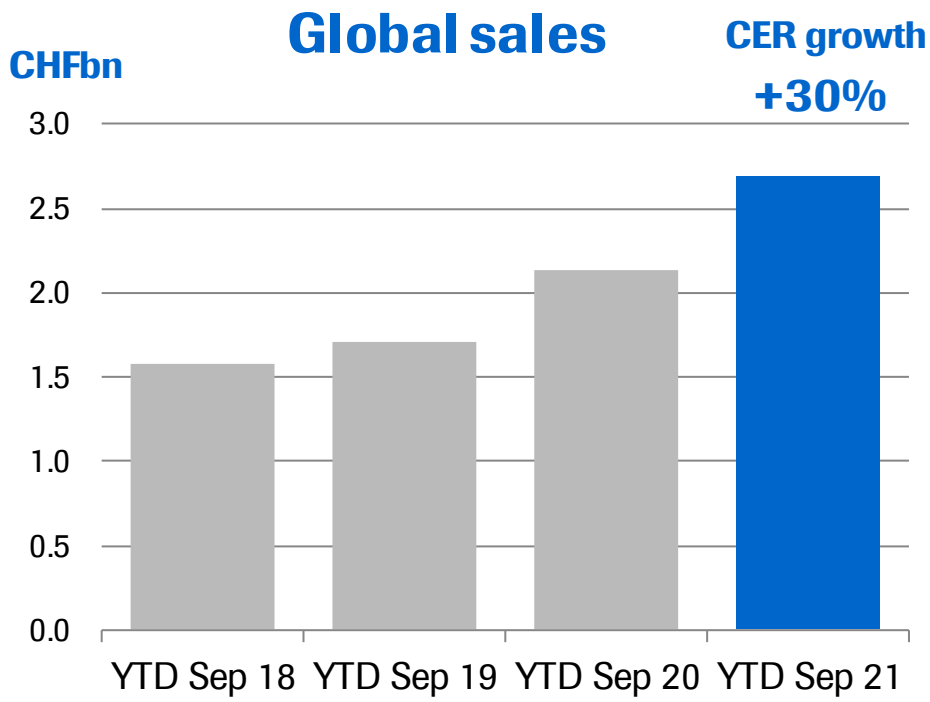


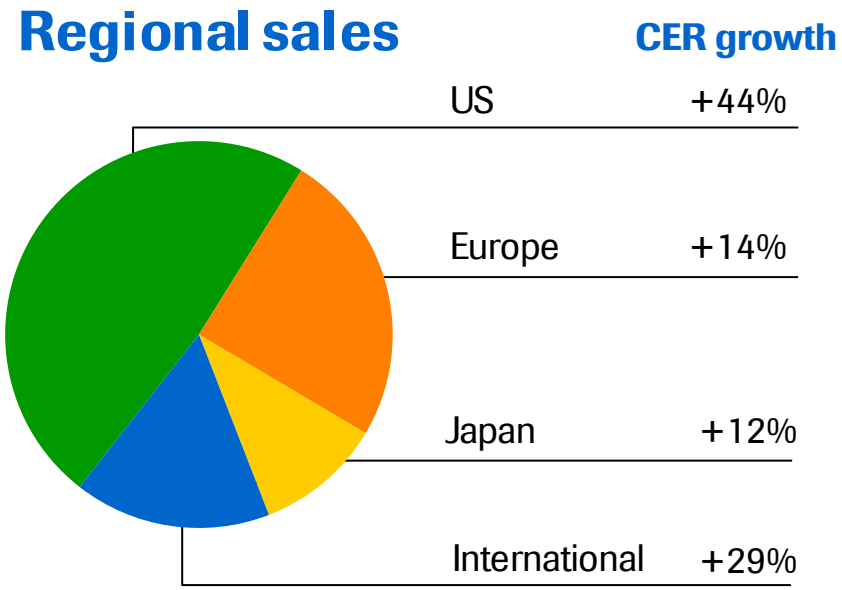
YTD Sep 2021 sales of CHF 2,974m

- US: Patients with residual disease being switched to Kadcyla; Cannibalization from Phesgo
- EU: Patients with residual disease being switched to Kadcyla; Cannibalization from Phesgo
- International: Accelerated growth in all regions, especially LATAM and China

CER=Constant Exchange Rates

Actemra / RoActemra





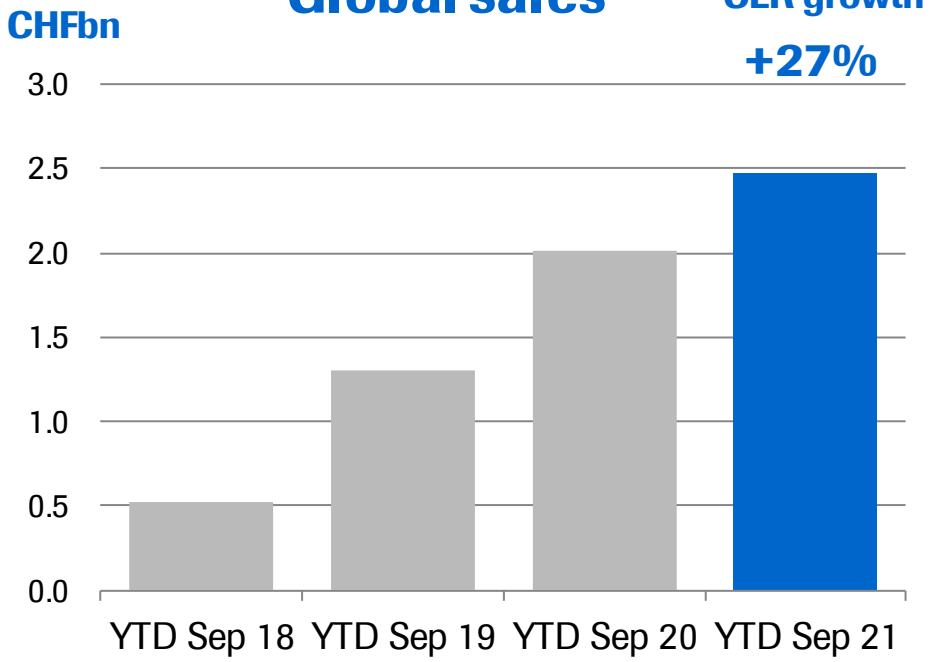
YTD Sep 2021 sales of CHF 2,690m

- US: Increased demand for SC formulation (home administration) and due to COVID-19
- EU: Market leadership in 1L RA monotherapy maintained; Growth driven by new RA, GCA and COVID-19
- International: Strong growth driven by all regions due to COVID-19

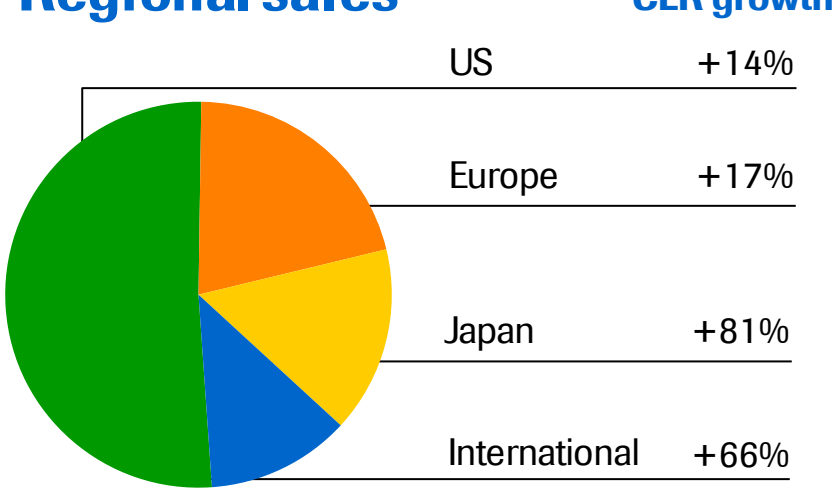
CER=Constant Exchange Rates

Tecentriq

Global sales



Regional sales



YTD Sep 2021 sales of CHF 2,477m

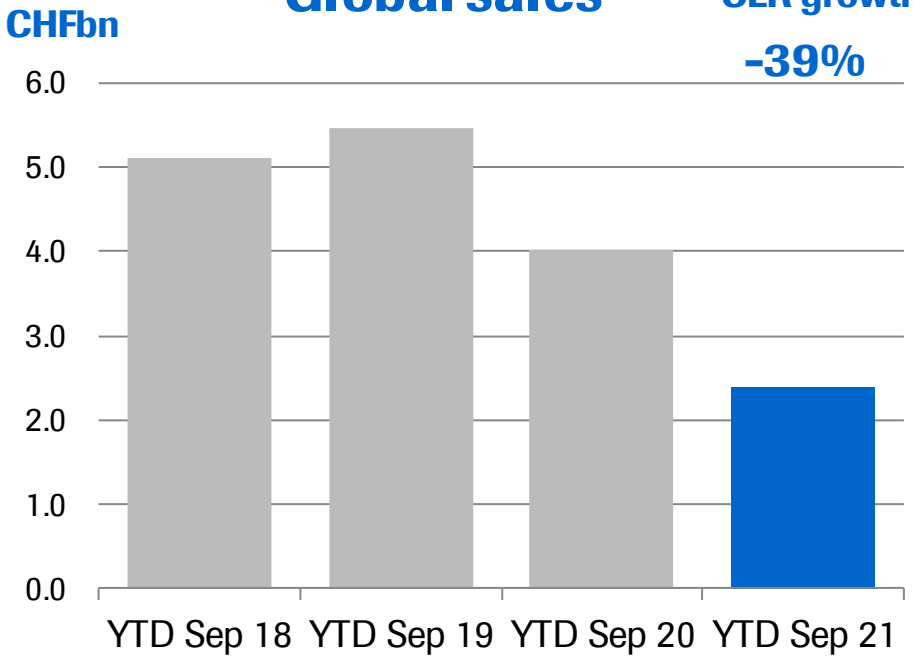
- US: Growth driven by first-in-class launches in 1L HCC and 1L SCLC
- EU: Growth driven by first-in-class launches in 1L HCC and 1L SCLC
- Japan: Growth driven by first-in-class launches in 1L HCC, 1L SCLC and 1L TNBC

CER=Constant Exchange Rates

Avastin

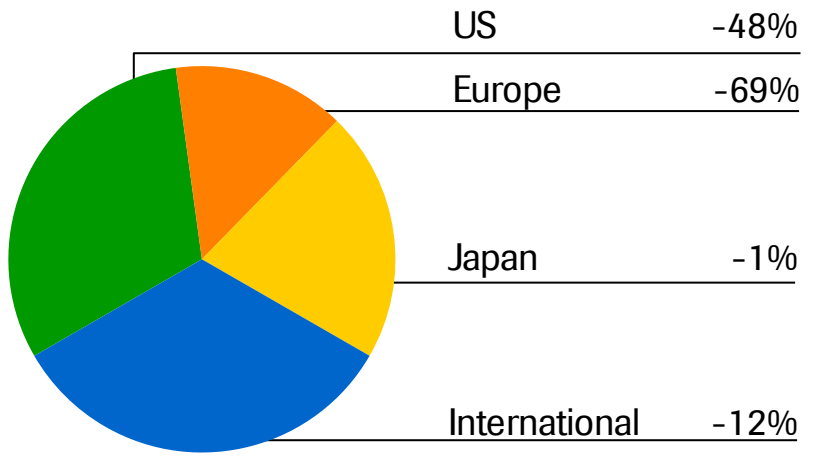
Global sales

CER growth
-39%



Regional sales

CER growth



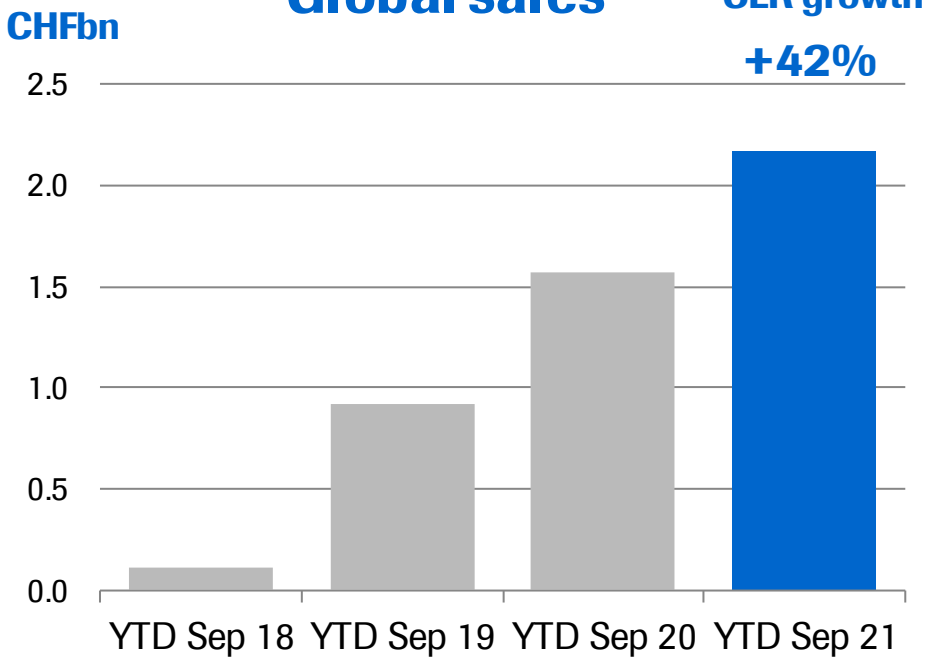
YTD Sep 2021 sales of CHF 2,390m

- US: Decline due to biosimilars
- EU: Decline due to biosimilars
- Japan: Limited decline due to biosimilars with narrow labels
- International: Decline due to biosimilars

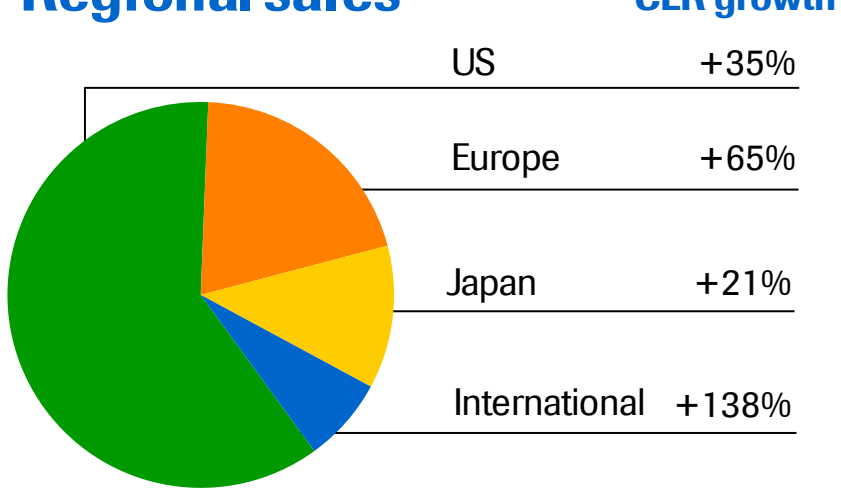
CER=Constant Exchange Rates

Hemlibra

Global sales



Regional sales

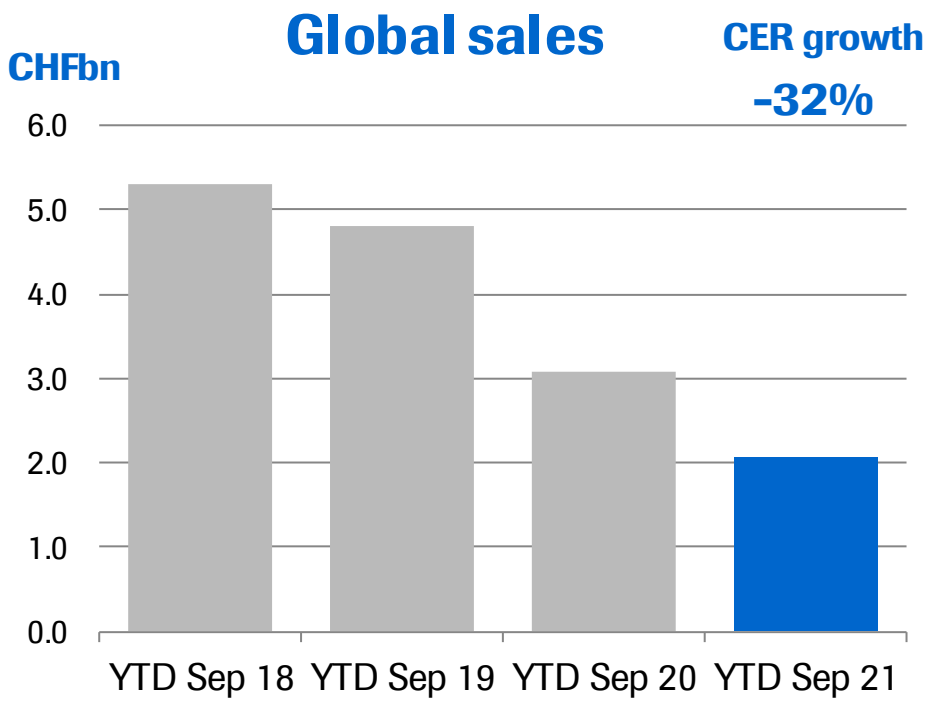


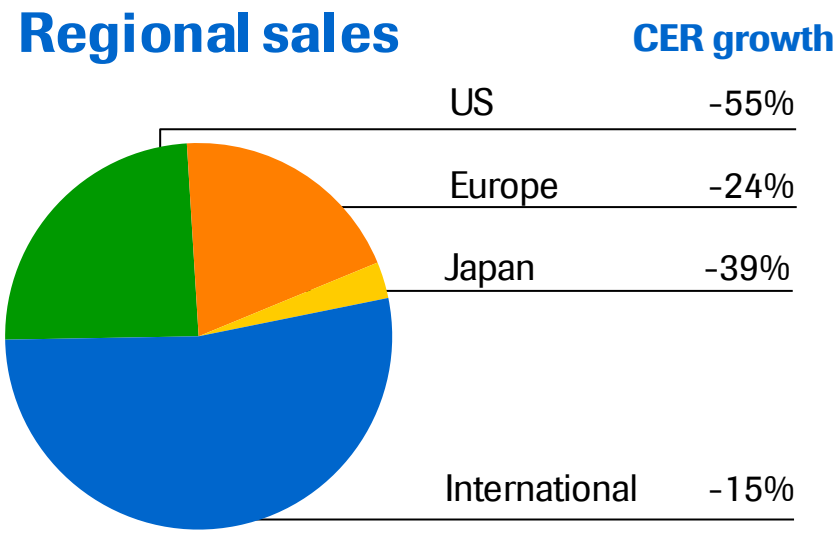
YTD Sep 2021 sales of CHF 2,172m

- US: Continued share gains in non-inhibitor patients
- EU: Continued share gains in non-inhibitor severe patients
- Japan: Strong uptake in non-inhibitor patients

CER=Constant Exchange Rates

Herceptin





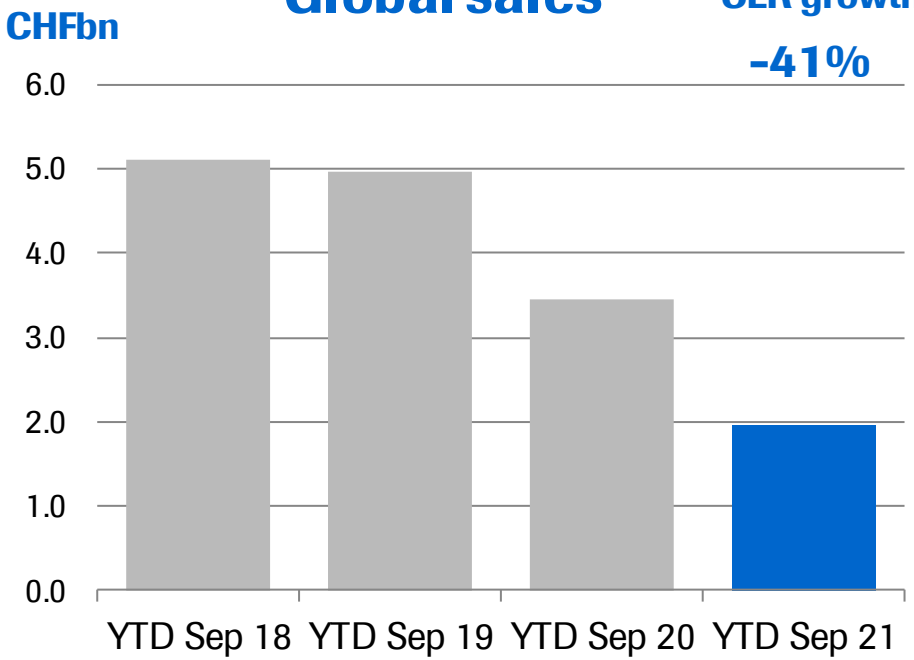
YTD Sep 2021 sales of CHF 2,061m

- US: Biosimilar erosion; Switching of patients with residual disease to Kadcyla; Cannibalization from Phesgo
- EU: Biosimilar erosion; Switching of patients with residual disease to Kadcyla; Cannibalization from Phesgo
- Japan: Decline due to biosimilars
- International: Decline due to biosimilars

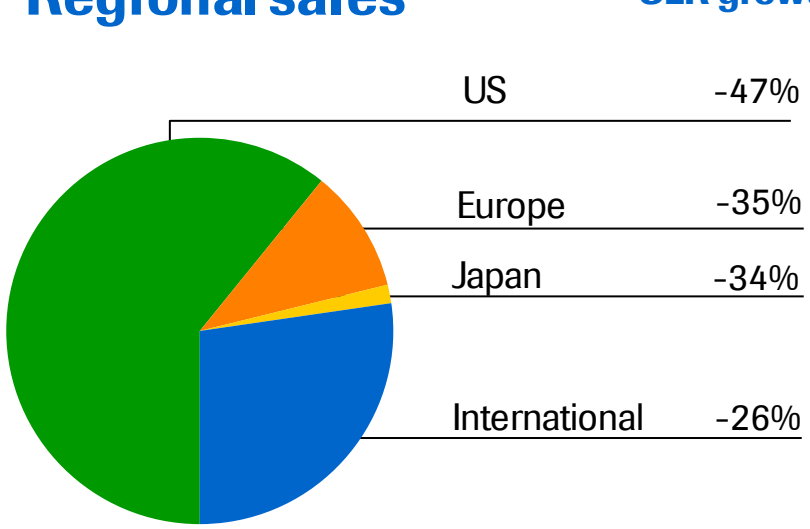
CER=Constant Exchange Rates

MabThera / Rituxan

Global sales



Regional sales

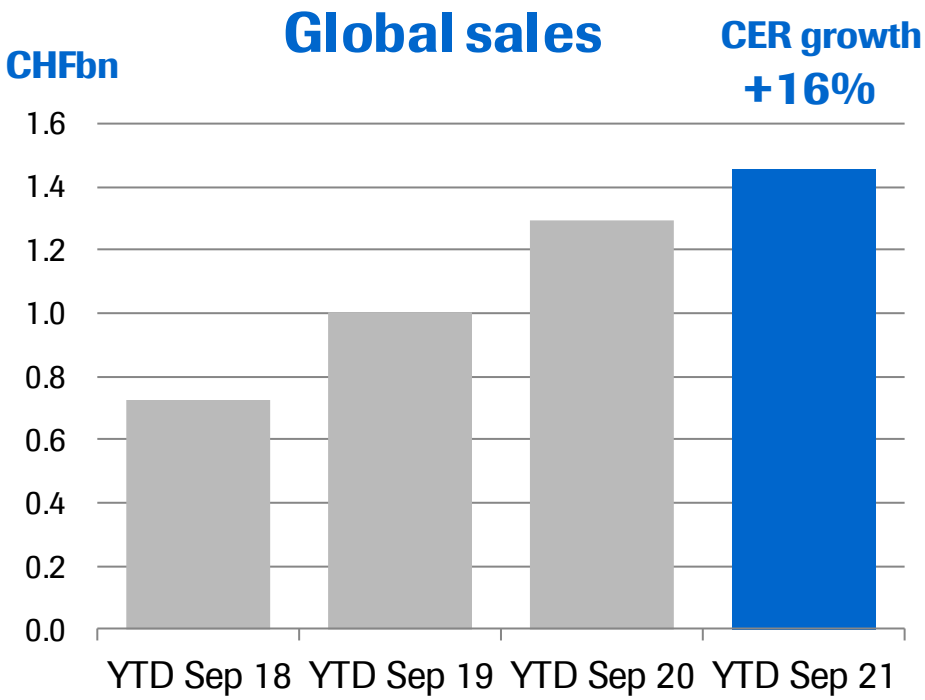


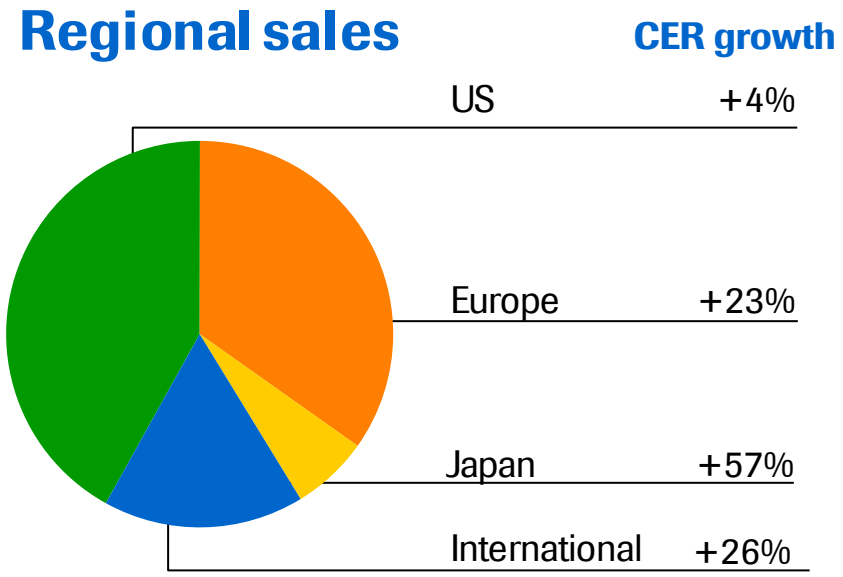
YTD Sep 2021 sales of CHF 1,968m

- US: Decline due to biosimlars
- EU: Decline due to biosimlars
- Japan: Decline due to biosimilars
- International: Decline due to biosimilars

CER=Constant Exchange Rates

Kadcyla



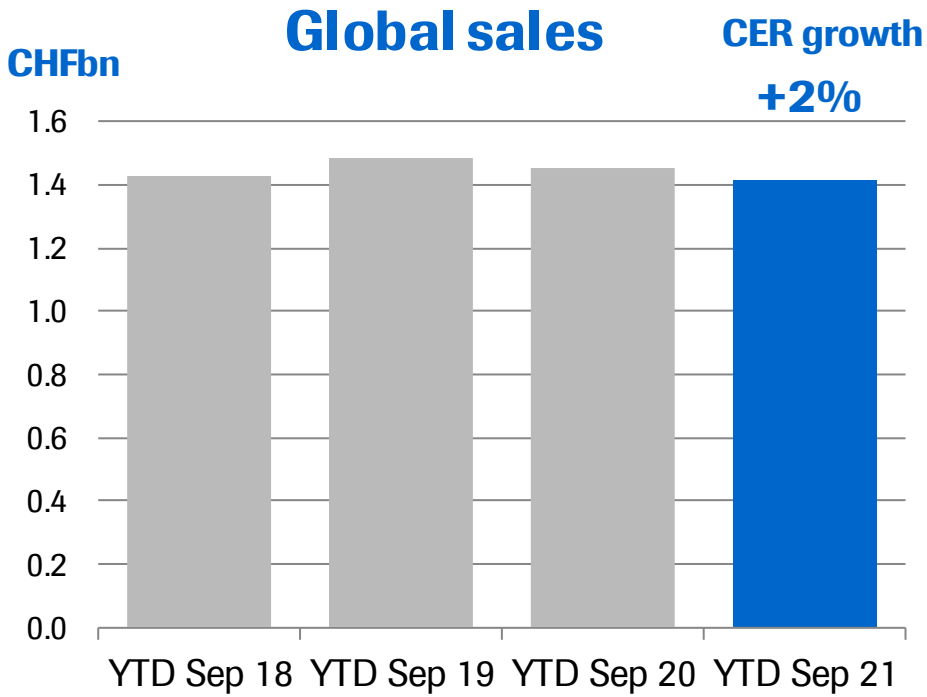


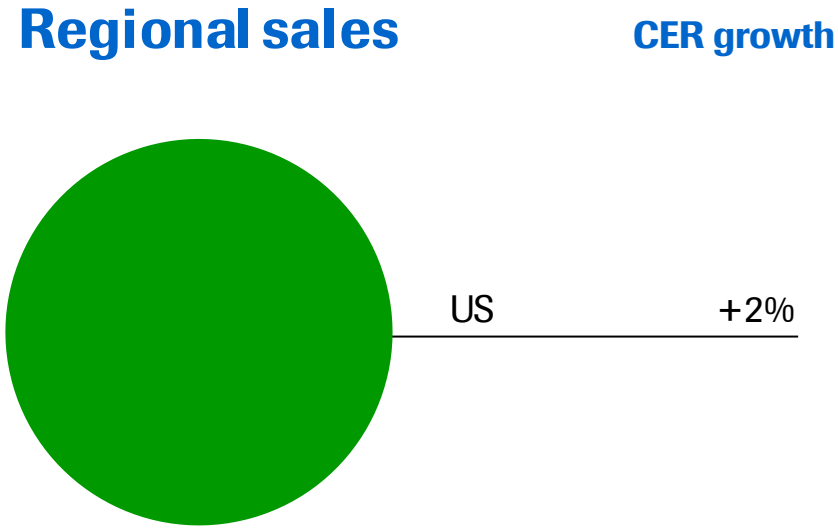
YTD Sep 2021 sales of CHF 1,460m

- US: Uptake in adjuvant eBC in patients with residual disease after neoadjuvant treatment
- EU: Strong uptake in adjuvant eBC
- International: Growth driven by all regions

CER=Constant Exchange Rates

Xolair





YTD Sep 2021 sales of CHF 1,416m

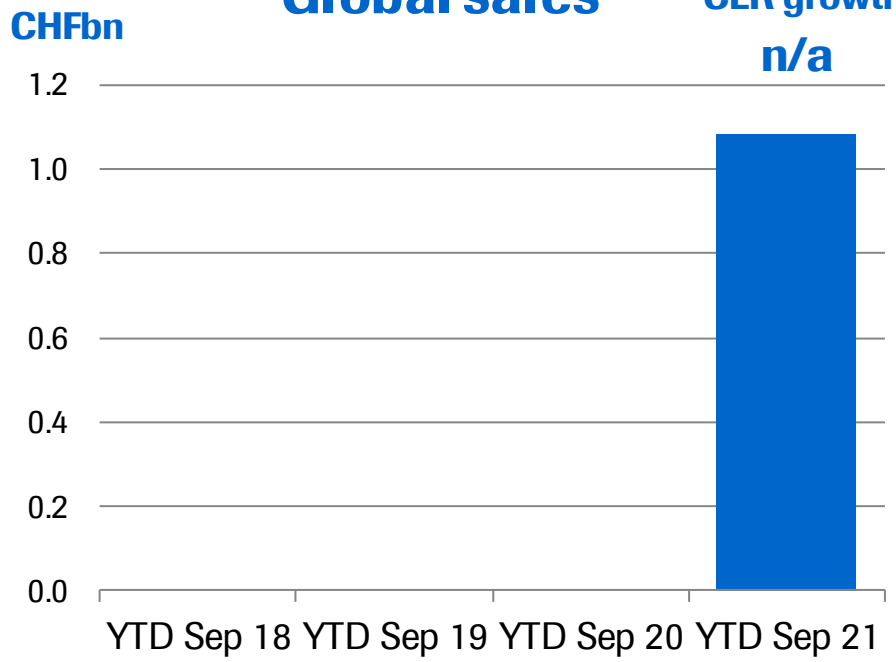
- US: Xolair remains market leader in growing biologics asthma market; Growth driven by chronic idiopathic urticaria (CIU)

CER=Constant Exchange Rates

Ronapreve

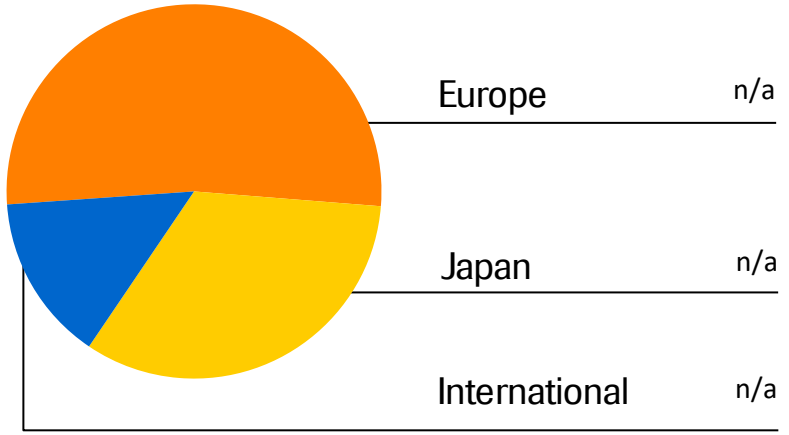
Global sales

CER growth n/a



Regional sales

CER growth

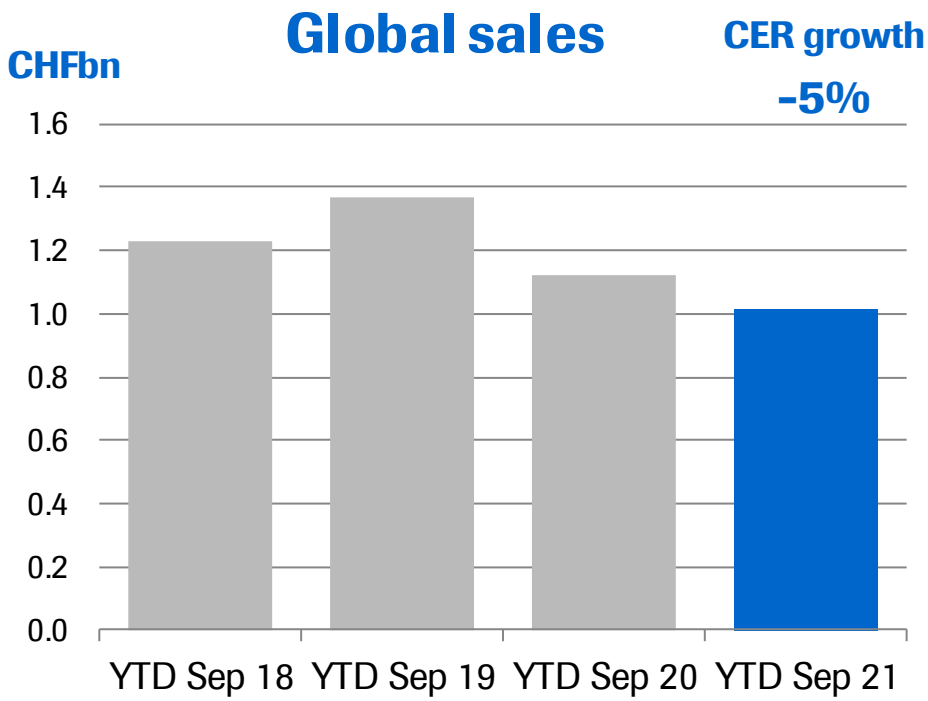


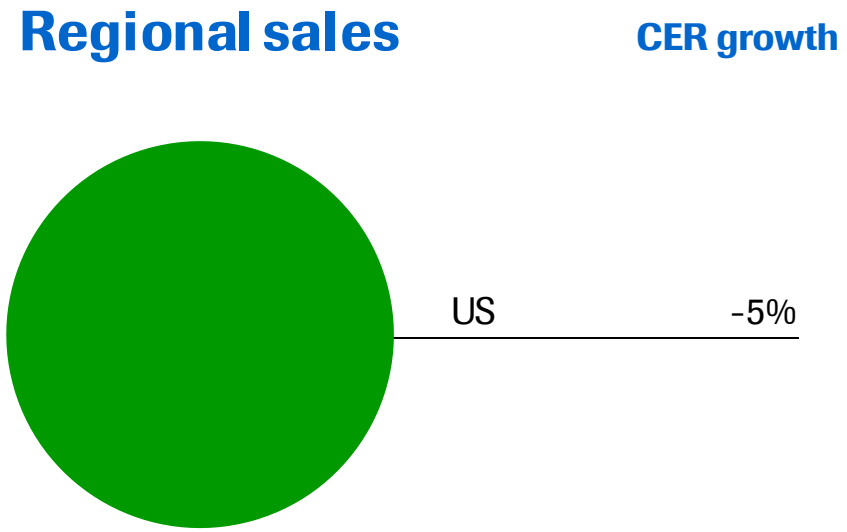
YTD Sep 2021 sales of CHF 1,084m

- EU: Government sales mainly in Germany, Italy, France
- Japan: Government sales started as of Q3

CER=Constant Exchange Rates

Lucentis





YTD Sep 2021 sales of CHF 1,017m

- Volume growth off-set by price decline; First biosimilar expected by mid 2022
- Overall market shares stable

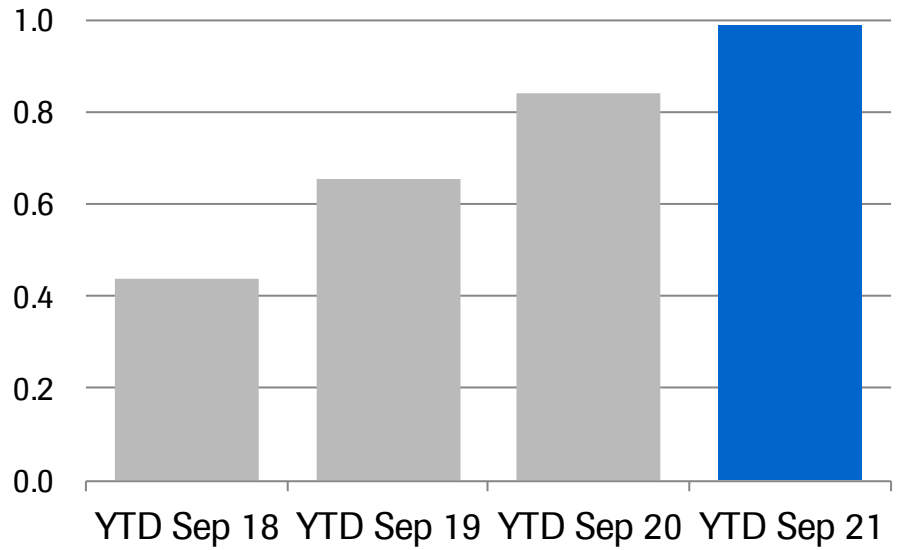
CER=Constant Exchange Rates

Alecensa

Global sales

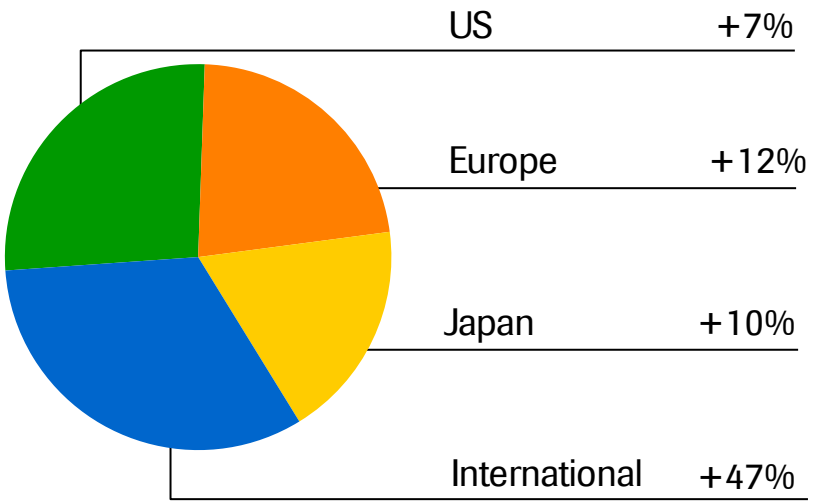
CHFbn

CER growth +19%



Regional sales

CER growth



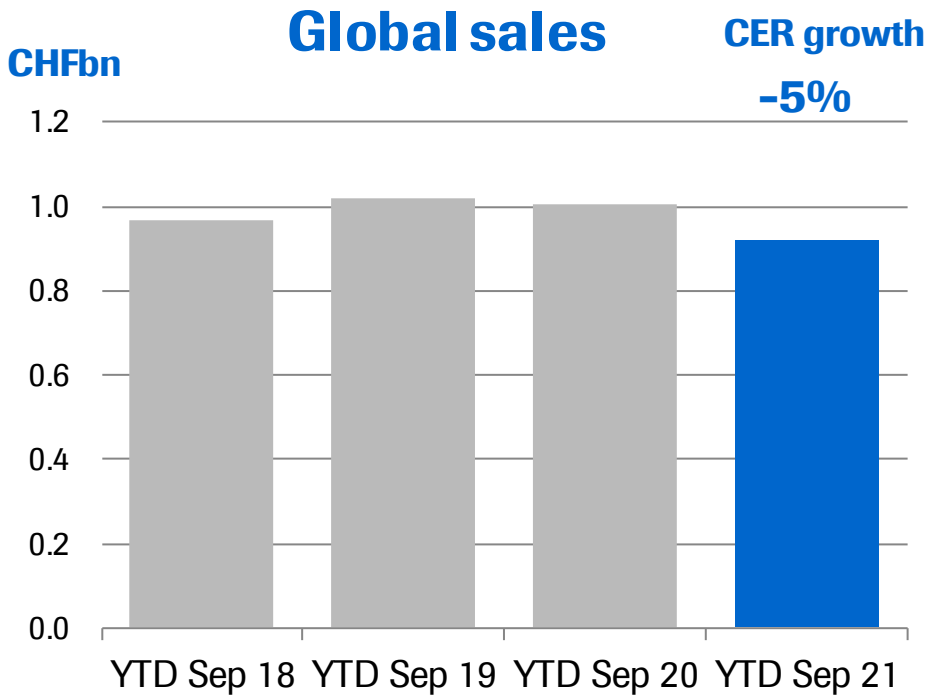
YTD Sep 2021 sales of CHF 988m

- US: Patient share in 1L growing >70%
- EU: Growth driven by 1L; EU-5 new patient share reaching >80%
- Japan: Growth due to 1L new patient share reaching >70%
- International: Growth largely driven by China

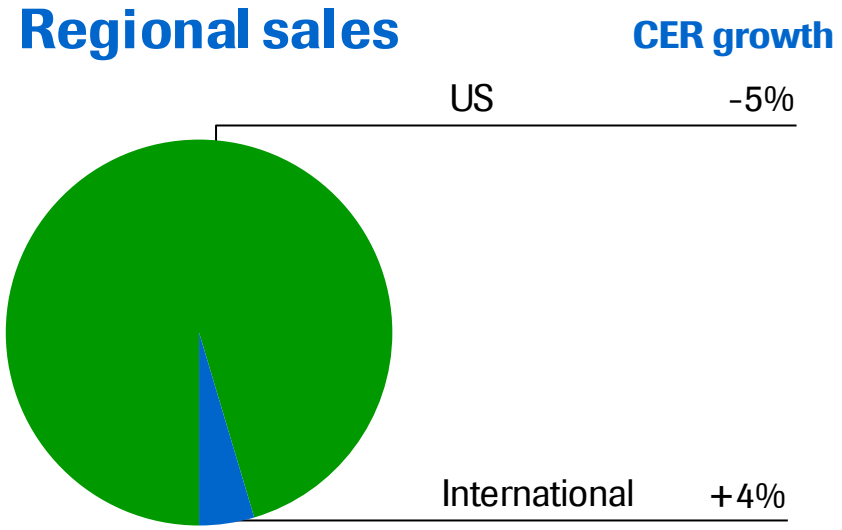
CER=Constant Exchange Rates

TNKase / Activase

Global sales



Regional sales



YTD Sep 2021 sales of CHF 921m

- US: Decline due to COVID-19 impact

CER=Constant Exchange Rates

Pipeline summary

Marketed products additional indications

Global Development late-stage trials

pRED (Roche Pharma Research & Early Development)

gRED (Genentech Research & Early Development)

Spark

Roche Group YTD Sep 2021 sales

Diagnostics

Foreign exchange rate information

YTD Sep 2021: Diagnostics Division CER growth

By Region and Customer Area (vs. 2020)

	Global		EMEA[1]		North America		Asia-Pacific		Latin America	
	CHFm	% CER growth	CHFm	% CER growth	CHFm	% CER growth	CHFm	% CER growth	CHFm	% CER growth
Core Lab[2]	5,610	26	1,977	28	1,006	17	2,237	25	390	47
Molecular Lab	3,454	36	1,265	28	1,290	30	772	65	127	32
Point of Care	2,058	279	1,526	495	160	-7	212	167	160	444
Diabetes Care	1,294	4	713	-2	221	4	212	9	148	33
Pathology Lab	889	14	234	17	462	9	178	21	15	29
Diagnostics Division	**13,305**	**39**	**5,715**	**54**	**3,139**	**18**	**3,611**	**35**	**840**	**63**

CER=Constant Exchange Rates; [1] Europe, Middle East and Africa; [2] incl. Roche Information Solutions

Diagnostics Division quarterly sales and CER growth[1]

	Q2 20		Q3 20		Q4 20		Q1 21		Q2 21		Q3 21	
	CHFm	% CER	CHFm	% CER	CHFm	% CER	CHFm	% CER	CHFm	% CER	CHFm	% CER
Core Lab[2]	1,439	-17	1,666	-3	1,707	-2	1,765	31	1,961	36	1,884	12
Molecular Lab	944	91	1,020	109	1,182	125	1,107	86	1,109	19	1,238	21
Point of Care	170	-10	181	12	538	212	716	281	900	424	442	143
Diabetes Care	407	-9	429	6	409	-14	460	13	434	7	400	-7
Pathology Lab	238	-8	287	12	293	3	282	9	308	32	299	4
Diagnostics Division	**3,198**	**2**	**3,583**	**18**	**4,129**	**28**	**4,330**	**55**	**4,712**	**48**	**4,263**	**18**

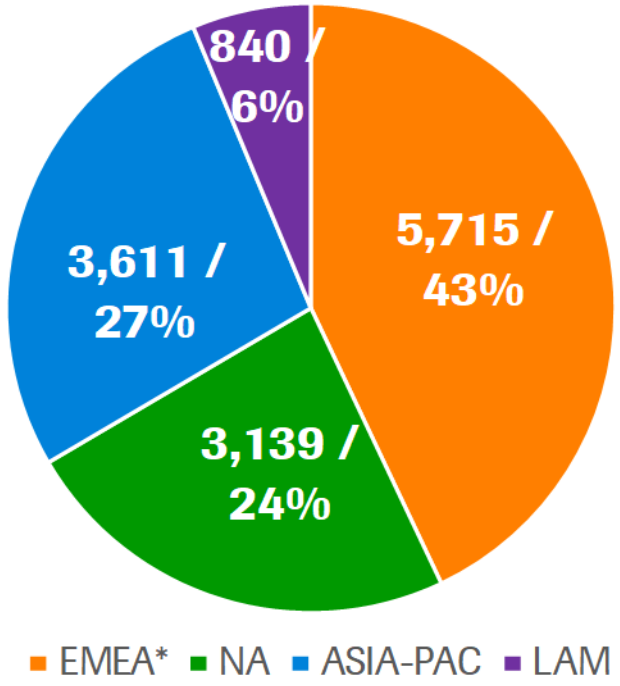
CER=Constant Exchange Rates; [1] versus same period of prior year; [2] incl. Roche Information Solutions

YTD Sep 2021: Diagnostics Division regional sales

Growth driven by EMEA and Asia Pacific

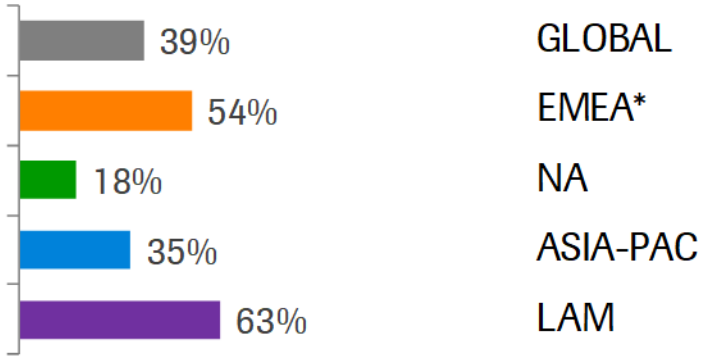
Sales YTD CHFm & % of total sales

Total YTD Sales = 13,305



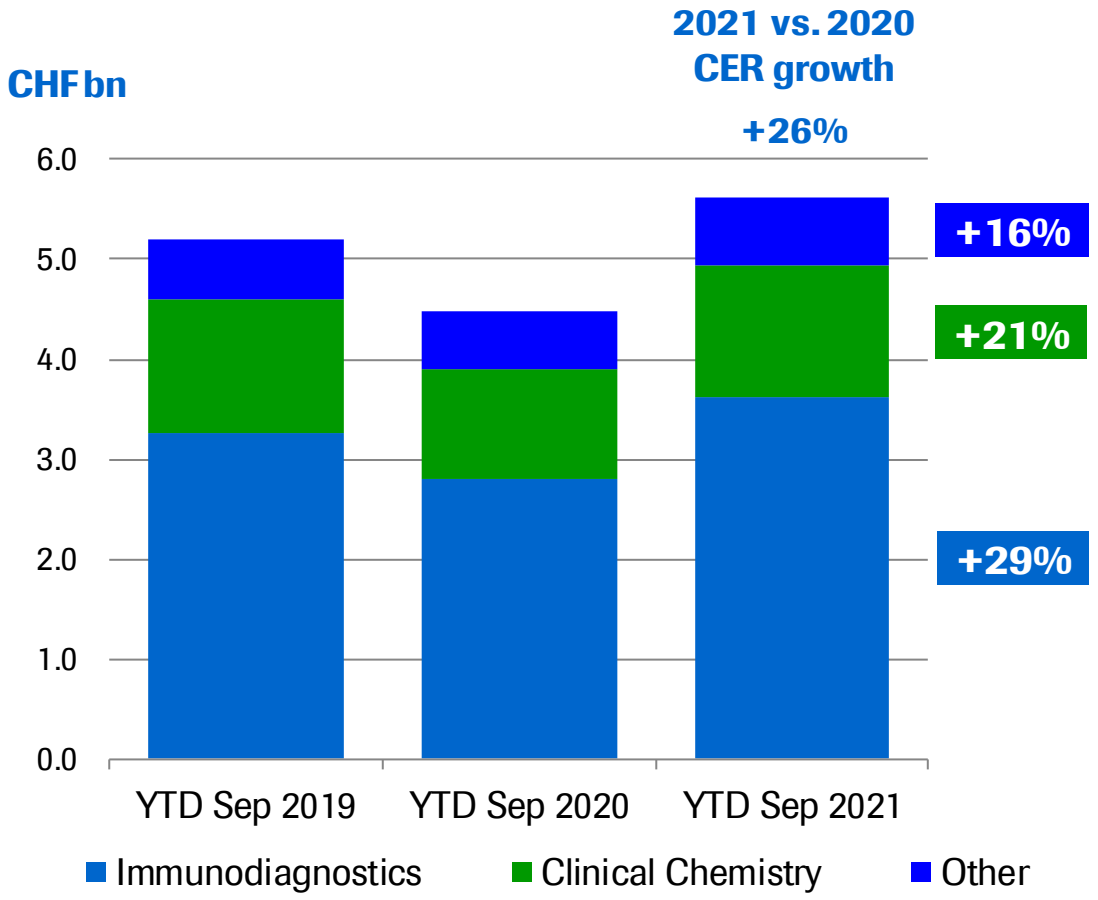
Sales growth at CER

Diagnostics Division



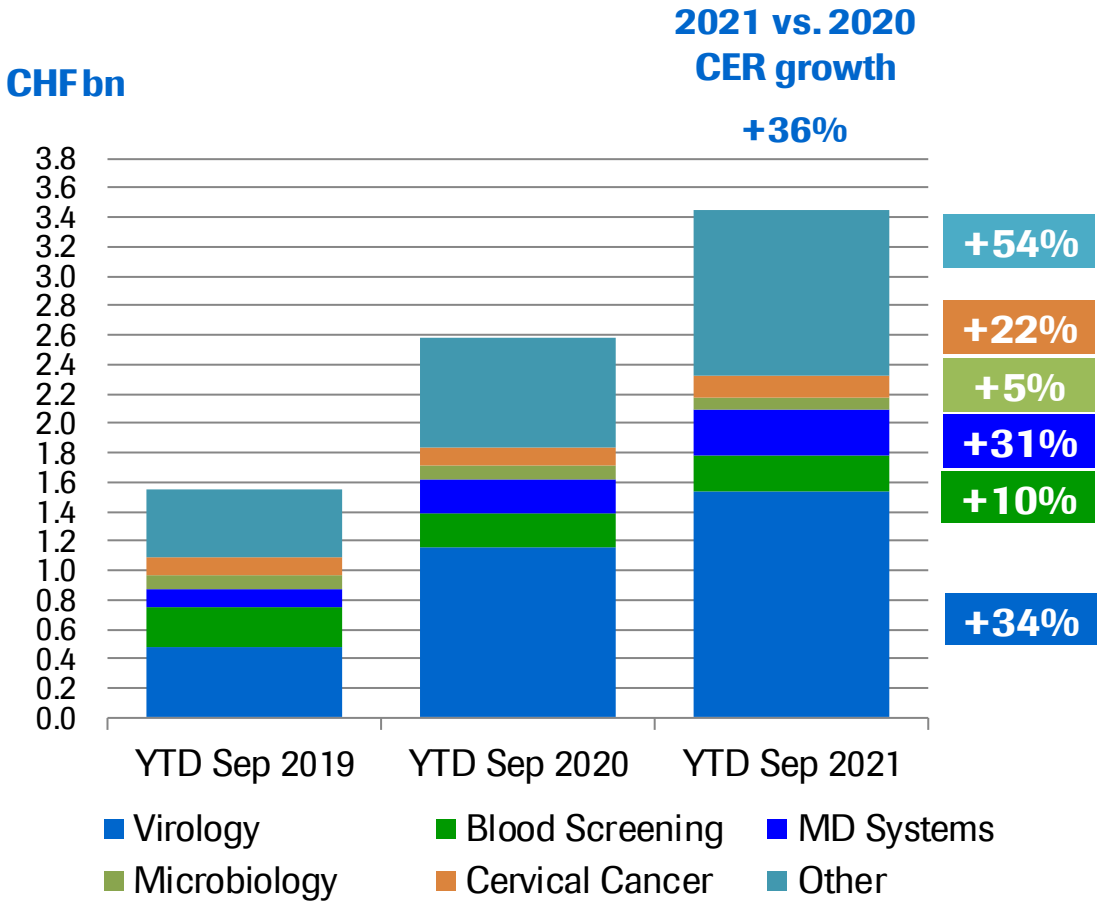
CER = Constant Exchange Rates (avg. full year 2020); * Europe, Middle East and Africa

Core Lab



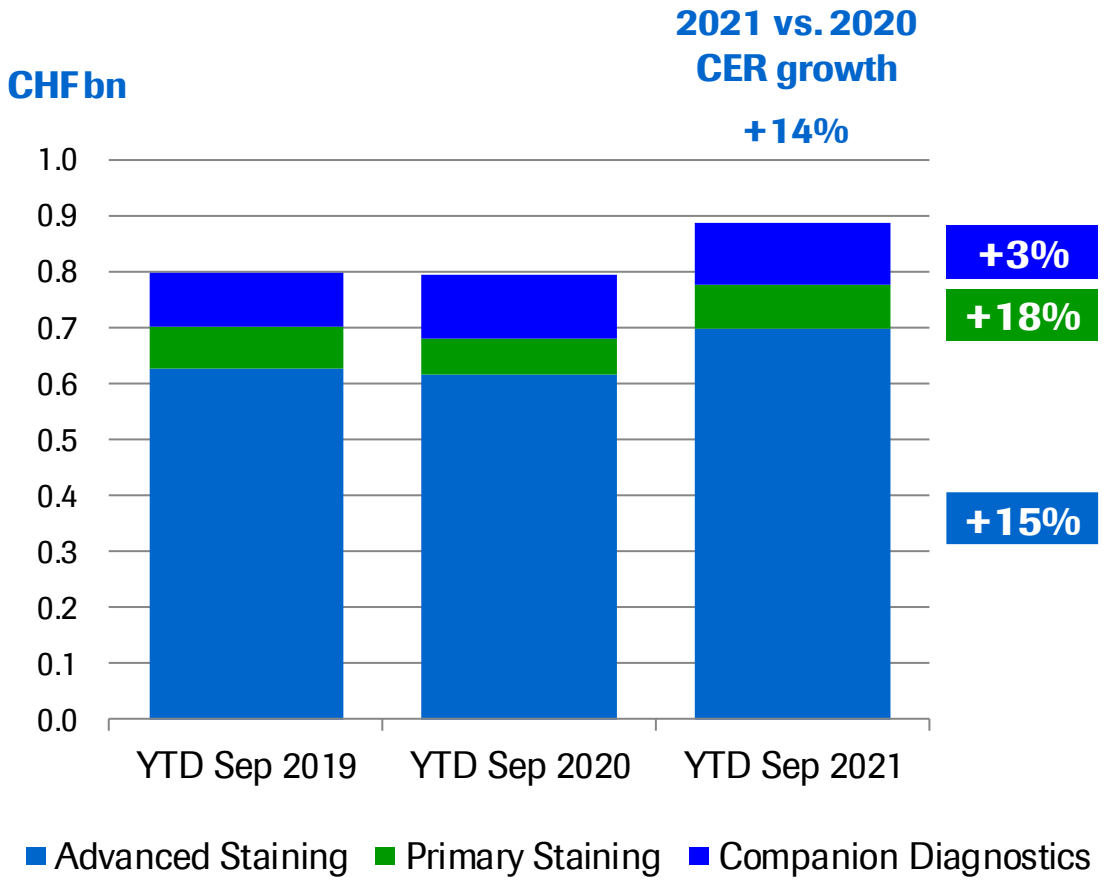
CER=Constant Exchange Rates; underlying growth of Core Lab excluding Roche Information Solutions: +25%

Molecular Lab



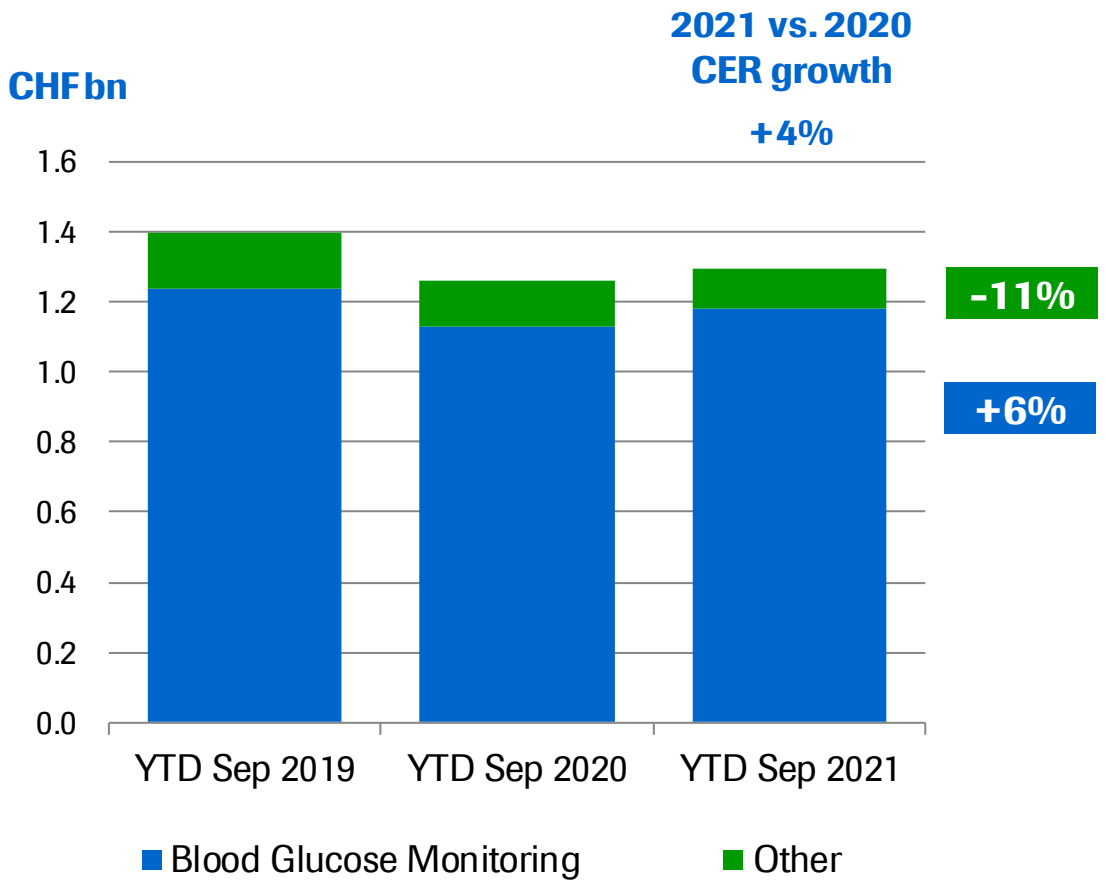
CER=Constant Exchange Rates

Pathology Lab



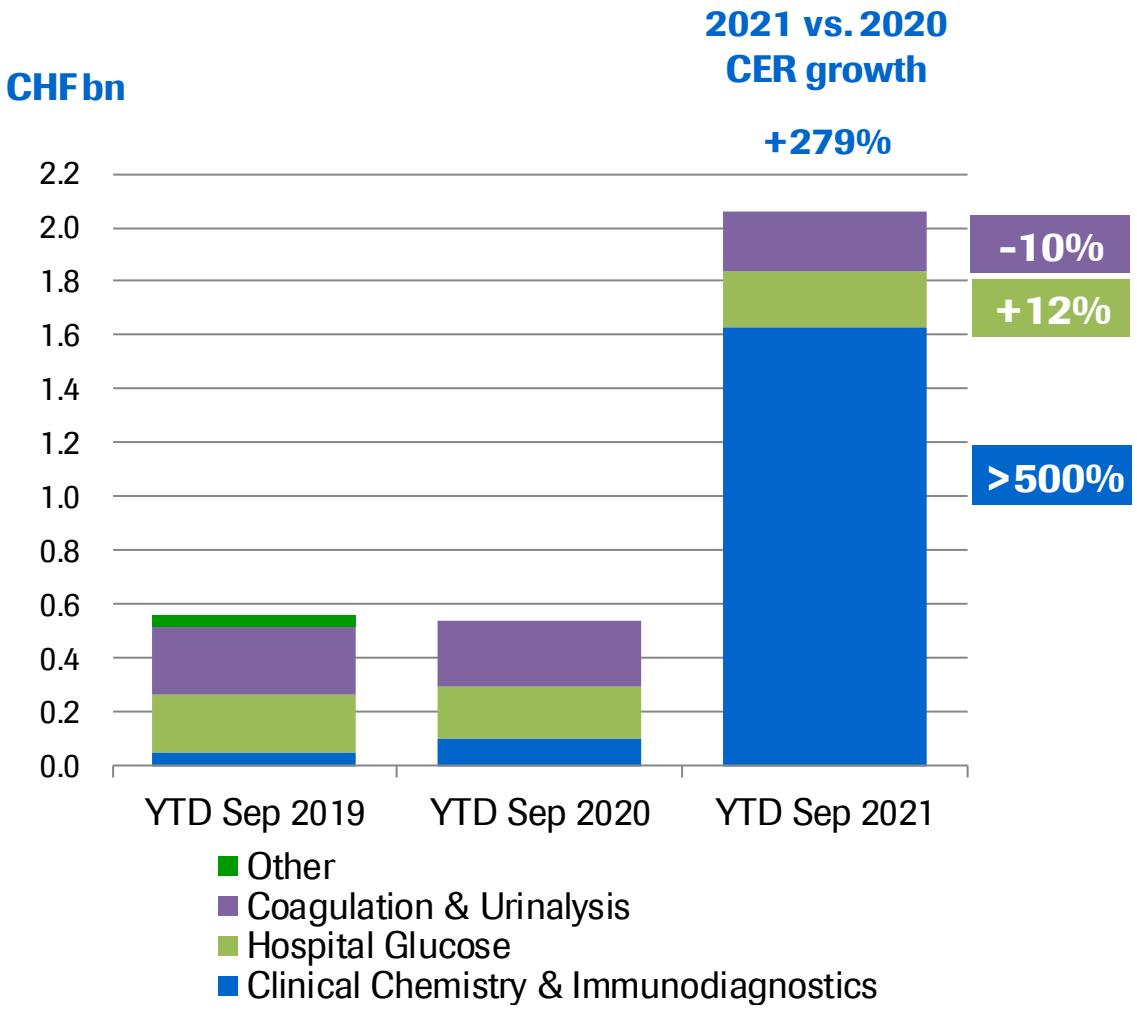
CER=Constant Exchange Rates

Diabetes Care



CER=Constant Exchange Rates

Point of Care



CER=Constant Exchange Rates

Pipeline summary

Marketed products additional indications

Global Development late-stage trials

pRED (Roche Pharma Research & Early Development)

gRED (Genentech Research & Early Development)

Spark

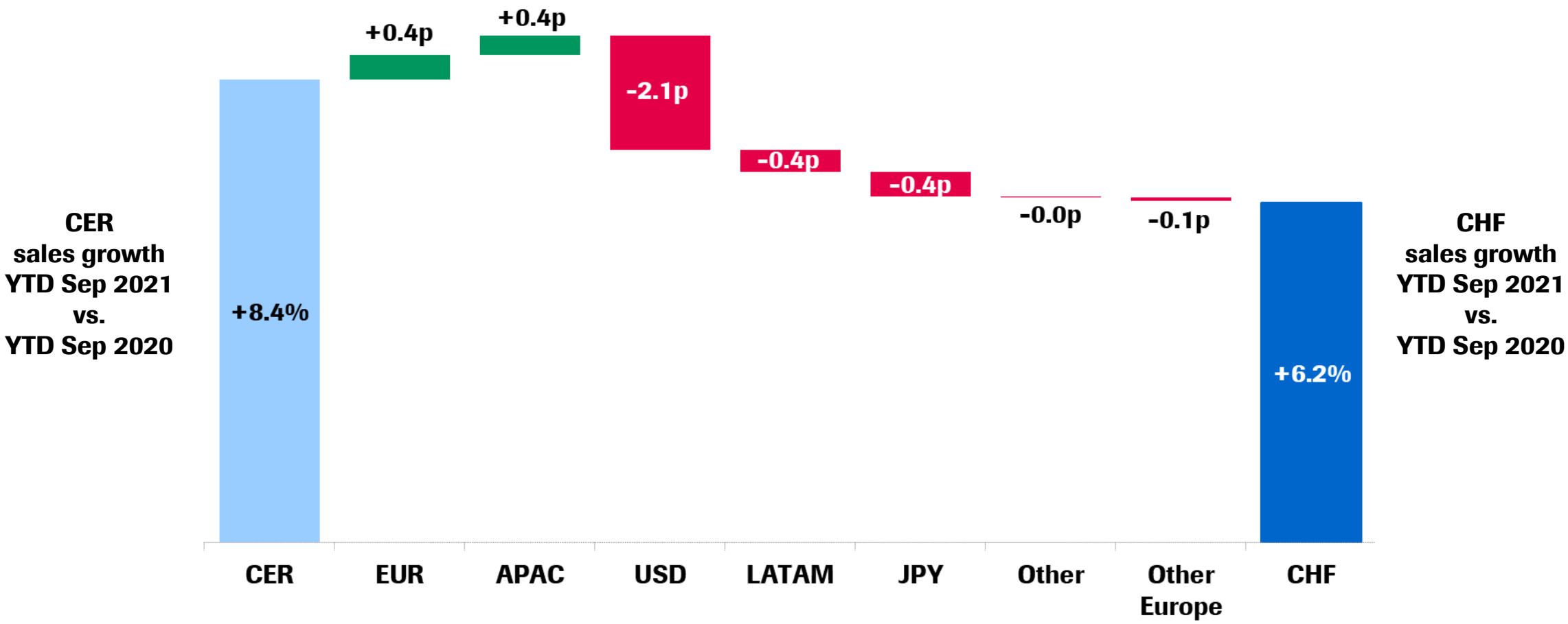
Roche Group YTD Sep 2021 sales

Diagnostics

Foreign exchange rate information

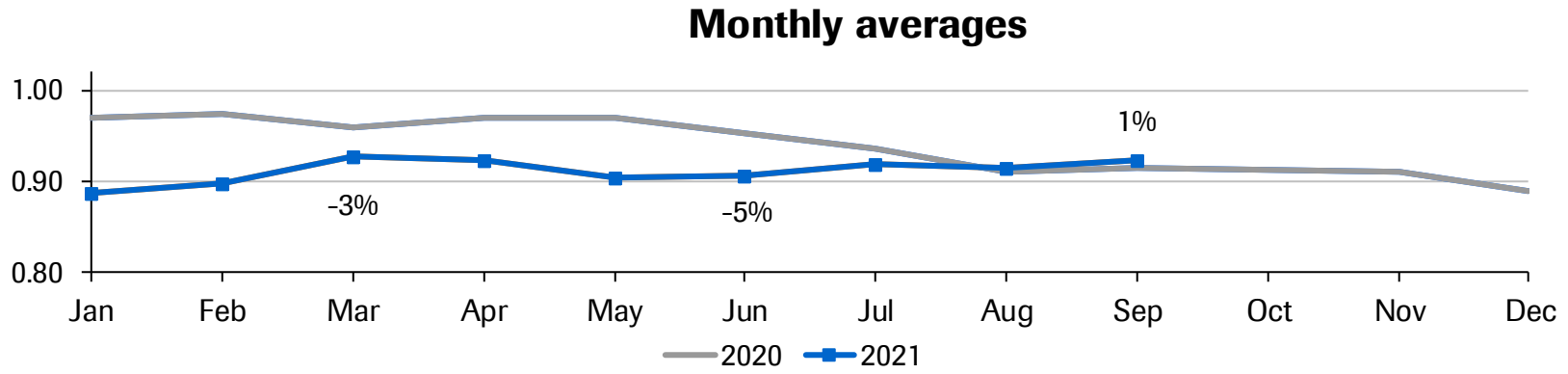
Exchange rate impact on sales growth

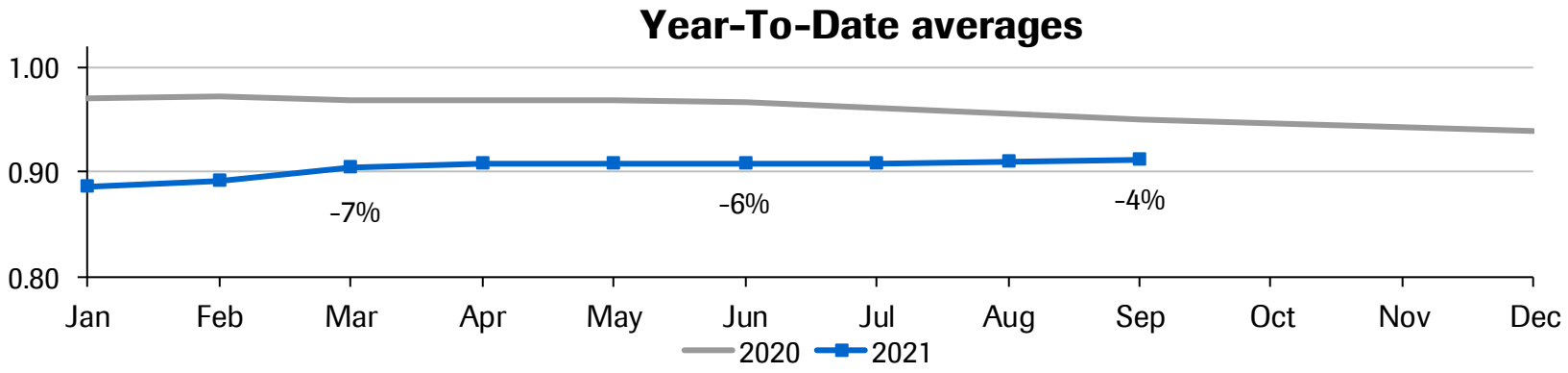
Negative impact due to most currencies and driven by the USD



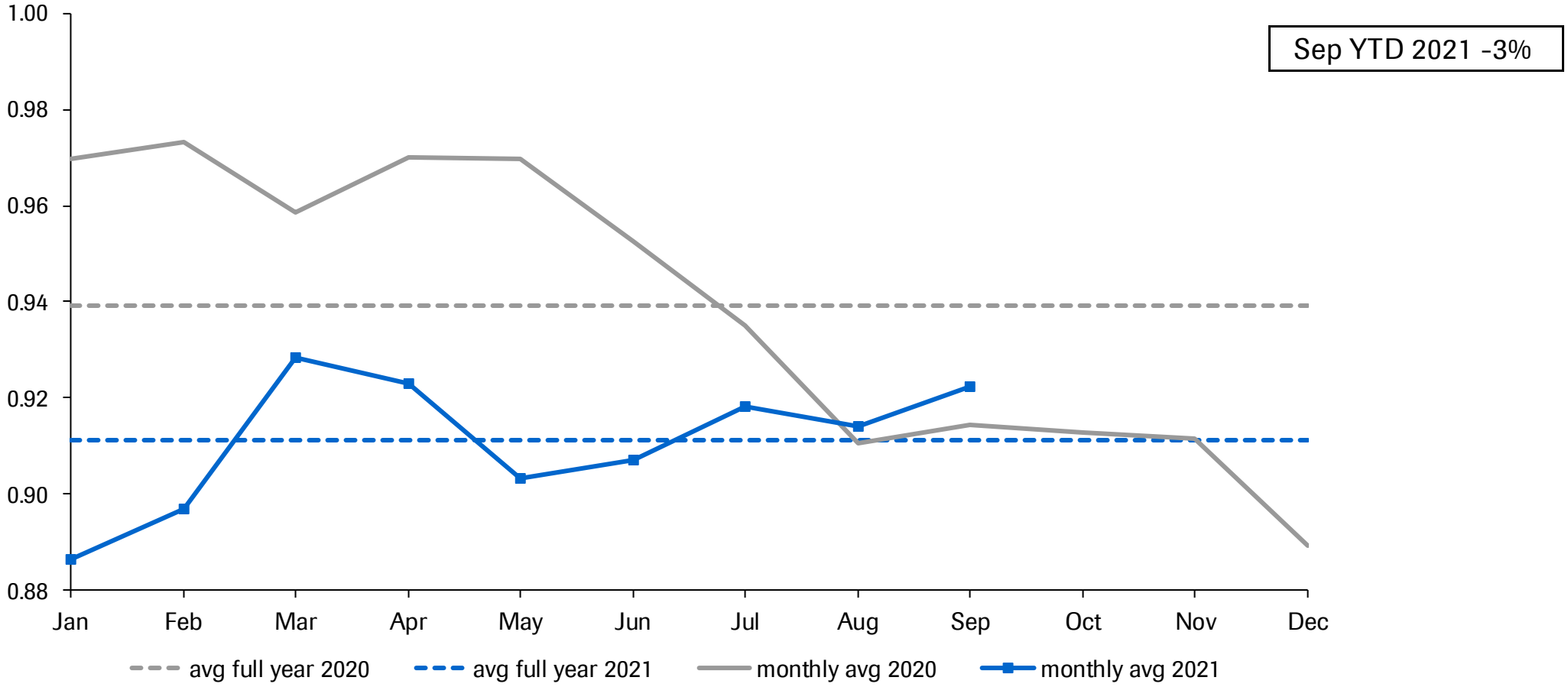
CER = Constant Exchange Rates (avg full year 2020)

CHF/USD

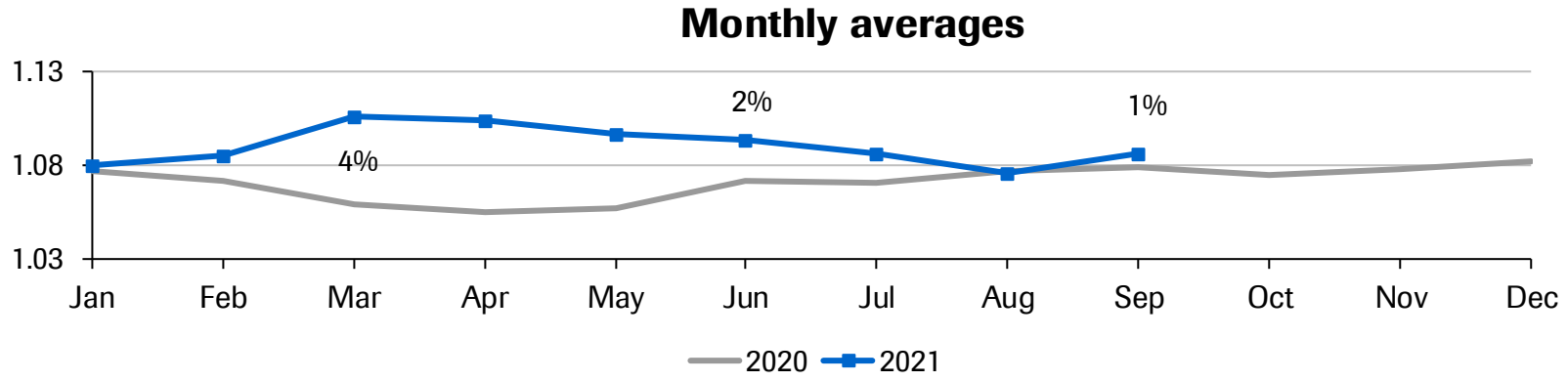

Monthly averages
1.00
0.90
0.80
-3%
-5%
1%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2020
2021

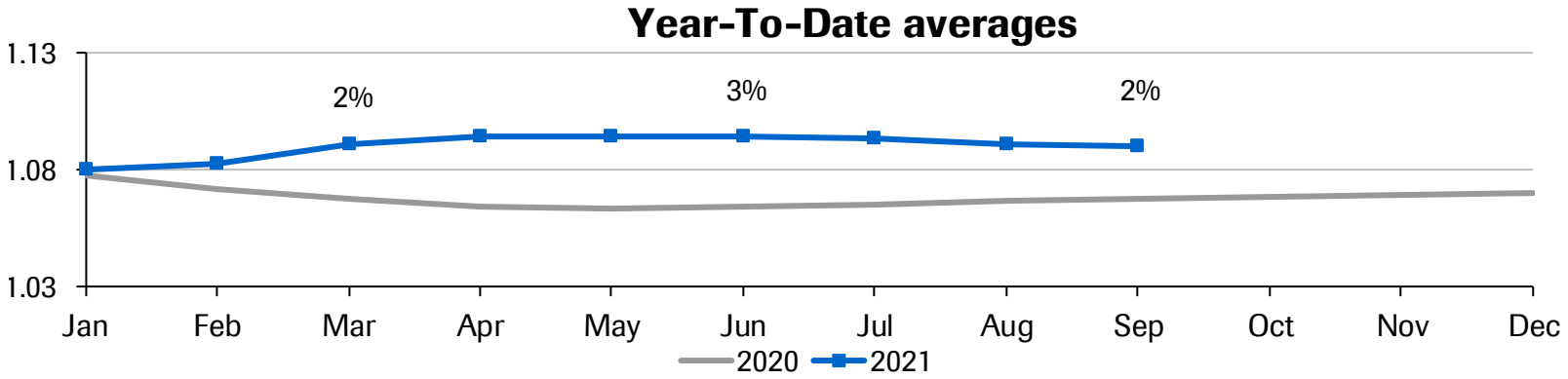

Year-To-Date averages
1.00
0.90
0.80
-7%
-6%
-4%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2020
2021

CHF/USD

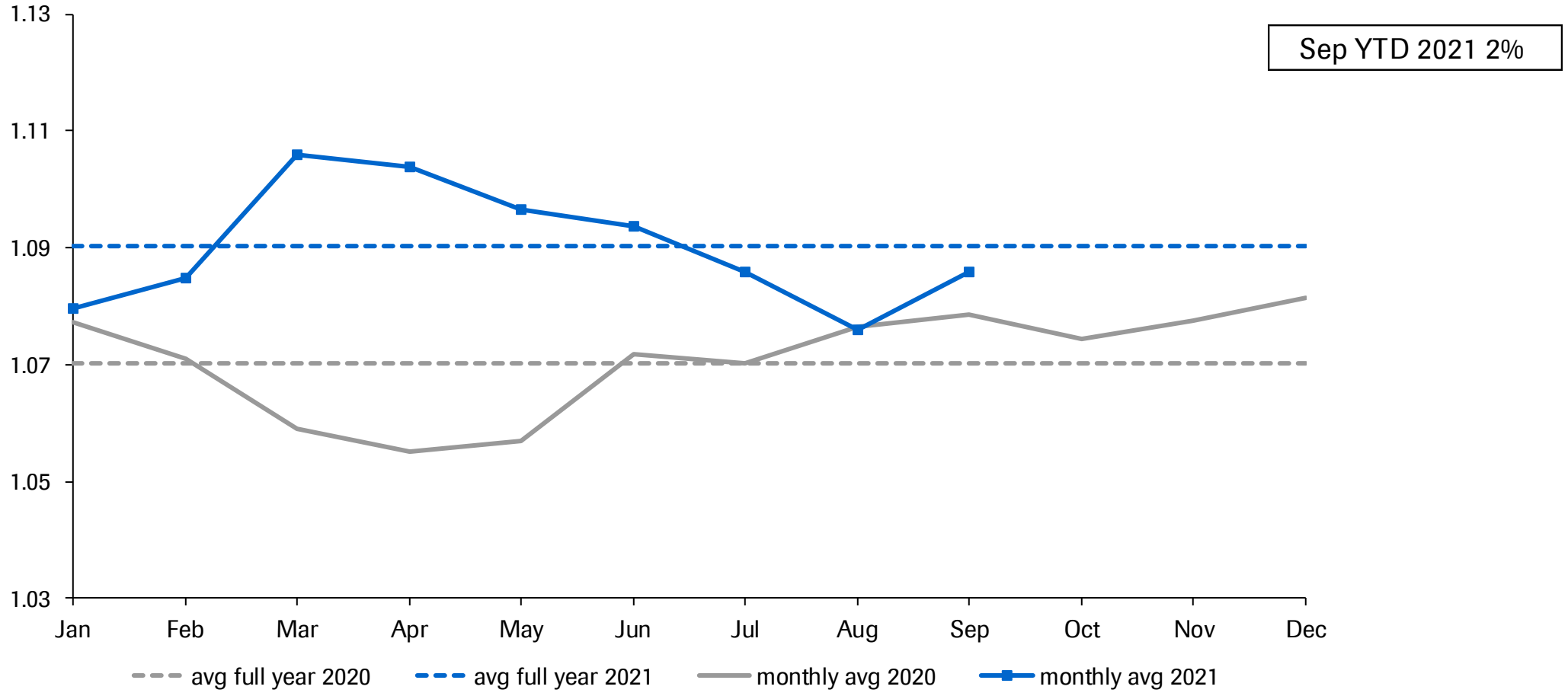

Sep YTD 2021 -3%
1.00
0.98
0.96
0.94
0.92
0.90
0.88
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
avg full year 2020
avg full year 2021
monthly avg 2020
monthly avg 2021

CHF/EUR


Monthly averages
1.13
1.08
1.03
2%
1%
4%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2020
2021

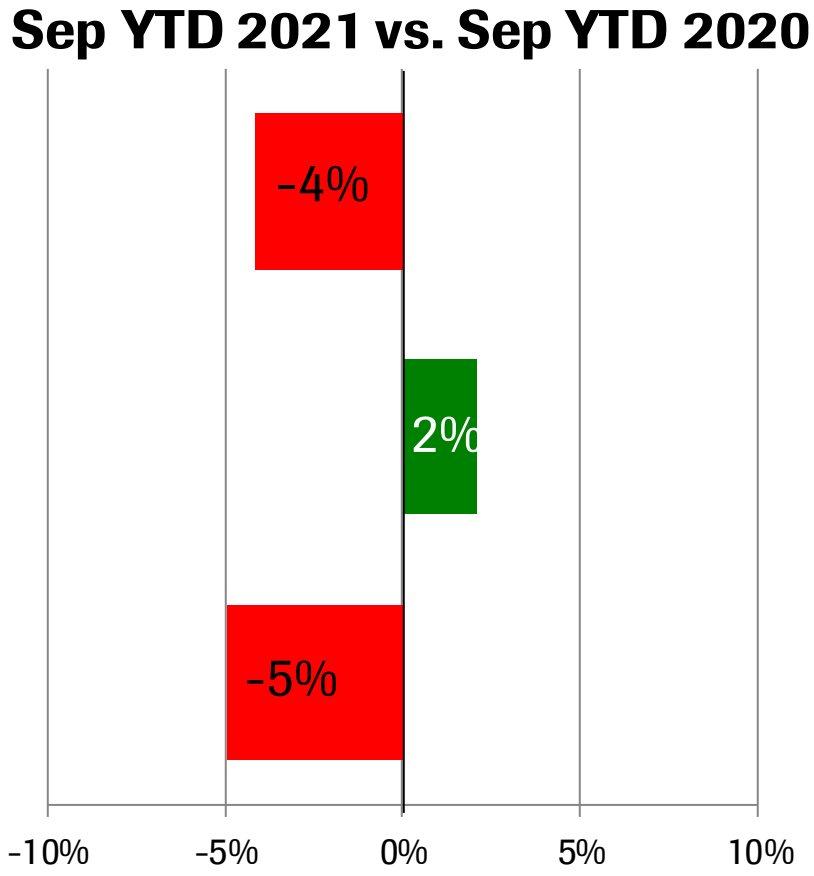

Year-To-Date averages
1.13
1.08
1.03
2%
3%
2%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2020
2021

CHF/EUR


Sep YTD 2021 2%
1.13
1.11
1.09
1.07
1.05
1.03
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
avg full year 2020
avg full year 2021
monthly avg 2020
monthly avg 2021

Average CHF Exchange Rates

	Sep YTD 2021	Sep YTD 2020
USD	0.91	0.95
EUR	1.09	1.07
JPY	0.84	0.88

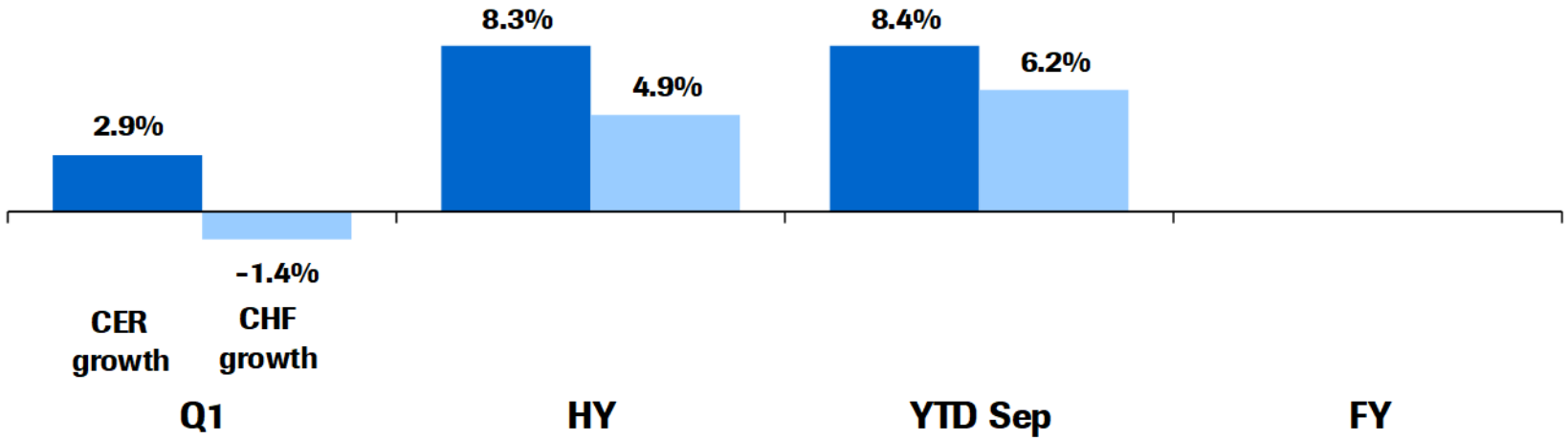


Exchange rate impact on sales growth

YTD Sep 2021: negative impact of USD and JPY, positive impact of EUR

Development of average exchange rates versus prior year period

	Q1	HY	YTD Sep	FY
CHF / USD	-6.6%	-6.1%	-4.2%	
CHF / EUR	2.1%	2.8%	2.1%	
CHF / JPY	-3.8%	-5.5%	-4.9%	
Difference in CHF / CER growth	-4.3%	-3.4%	-2.2%	



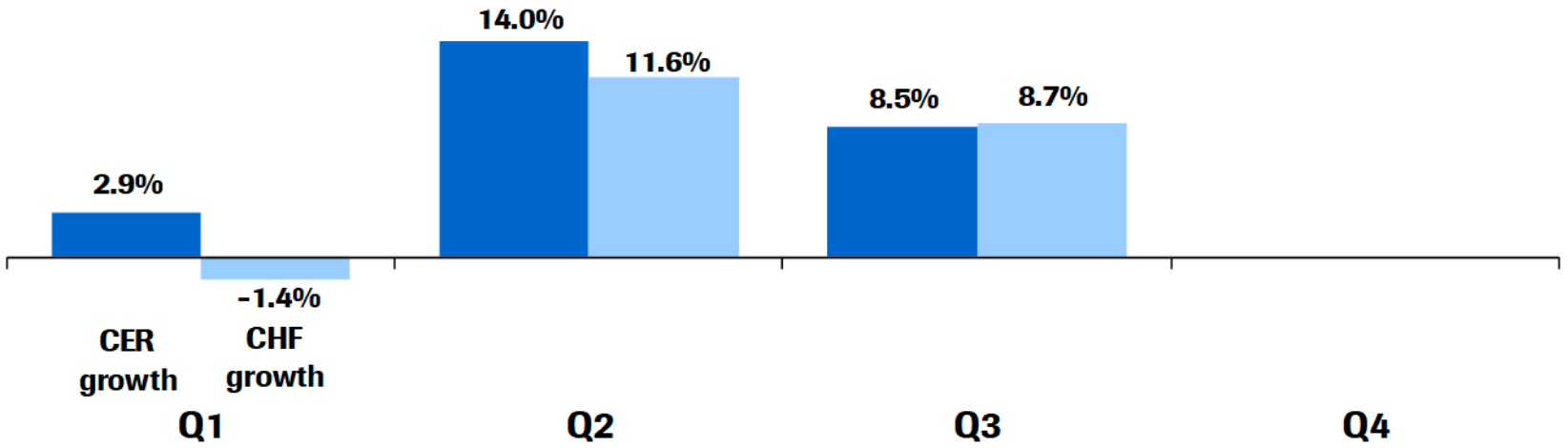
CER = Constant Exchange Rates (avg full year 2020)

Exchange rate impact on sales growth

Q3 2021: negative impact of JPY and USD, positive impact of EUR

Development of average exchange rates versus prior year period

	Q1	Q2	Q3
CHF / USD	-6.6%	-5.5%	-0.2%
CHF / EUR	2.1%	3.5%	0.7%
CHF / JPY	-3.8%	-7.5%	-3.6%
Difference in CHF / CER growth	-4.3%	-2.4%	0.2%



CER = Constant Exchange Rates (avg full year 2020)

Doing now what patients need next